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GRAND RESOURCE AREA RESOURCE MANAGEMENT PLAN

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U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Moab District
Grand Resource Area, Utah

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RECORD OF DECISION FOR THE PROPOSED RESOURCE MANAGEMENT PLAN AND FINAL ENVIRONMENTAL IMPACT STATEMENT, GRAND RESOURCE AREA

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RESOURCE MANAGEMENT PLAN

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RANGELAND PROGRAM SUMMARY

MOAB DISTRICT
Bureau of Land Management
United States Department of the Interior

July, 1985

I have decided to adopt the Resource Management Plan, as provided herein:

Roland Robinson 6/24/85
State Director, Utah Date

We recommend adoption of the Resource Management Plan, as provided herein:

Gene Nodine 6/21/85
District Manager, Moab District Date

Colin P. Christensen 6/21/85
Area Manager, Grand Resource Area Date

READEX FICHE

TABLE OF CONTENTS

Page

RECORD OF DECISION

Decision 1

Changes from the Proposed RMP and Final EIS. 3

Alternatives Considered 4
  Comparison of Alternatives 4
  Environmental Preferability 4
  Rationale 4

Mitigation Required 6
  Mitigation Means 6
  Implementation 6
  Monitoring and Enforcement 6

Changes to the Plan 6

THE RESOURCE MANAGEMENT PLAN

Introduction 9
  Purpose and Need 9
  The Resource Area 9
  The Planning Process 9
  Planning Issues 12

Goals and Objectives 15

Management Actions 16
  Critical Watersheds 16
  Livestock Requirements 16
  Wildlife Habitat Requirements 20
  Off-Road Vehicle Use and Management 20
  Lands Actions 22
  Utility Corridors 22
  Minerals 22
  Recreation 27
  Fire Management 29
  Management of Wilderness Study Areas 29

Ongoing Management Programs and Actions 29
  Grazing Administration 32
  Wildlife Habitat Management 32
  Mining Law Administration 32
  Realty 32
  Forest Management 32
  Cultural Resource Management 32
  Water Management 32

Page

Endangered Species 33
Transportation Maintenance 33
Wilderness 33
Contracts 33

Support Requirements 33
Critical Watersheds 33
Livestock Requirements 33
Wildlife Habitat Requirements 34
Off-Road Vehicle Use and Management 34
Lands Actions 34
Utility Corridors 34
Recreation 34
Fire Management 34

Monitoring the Plan 34
General Implementation Schedule 35

RANGELAND PROGRAM SUMMARY

Purpose and Need 37

Range Management Objectives 37

The Range Program 37
Selective Management 37
Allocation 38
Management Actions by Allotment 38
Range Improvement Projects 38
Monitoring 38

Implementation 39
Agreements and Decisions 39
Monitoring Studies 39
Range Improvement Projects 45

APPENDIXES

A - Comparative Summary, Alternative Management Actions and Impacts . . . . . . A- 1
B - Mitigating Measures A-19
C - Planning Criteria A-23
D - Management Category, Livestock Management Actions, and Initial and Future Animal Unit Months, by Allotment A-29
E - Utah Guidance for Range Studies A-39
F - Oil and Gas Category Stipulations A-43
G - Summary, Management of Wilderness Study Areas A-47

GLOSSARY . . . . G- 1

LIST OF ABBREVIATIONS . . . . L- 1

INDEX . . . . I- 1

LIST OF TABLES

Table	Title	Page
1	Management Goals for the Alternatives	5
2	Land Ownership and Public Land Administration	11
3	Allotment Project Packages, Costs, and Benefit/Cost Ratios	40
4	Numbers of New Monitoring Studies and Priority, by Allotment	43

LIST OF FIGURES

Figure	Title	Page
1	Grand Resource Area General Location Map	10
2	Prescribed Resource Management Planning Actions	13
3	Management of Critical Watersheds	17
4	Existing Land Treatments	18
5	Management of Livestock Grazing	19
6	Off-Road Vehicle Use Designations	21
7	Lands Actions	23
8	Utility Corridors and Avoidance Areas	24
9	Management of Minerals Other than Oil	25
10	Application of Oil and Gas Leasing Categories	26
11	Recreation Management	28
12	Fire Management	30
13	Wilderness Study Areas	31
14	Schedule for Issuance of Grazing Decisions	42

RECORD OF DECISION

DECISION

The Decision of the Bureau of Land Management (BLM) is to adopt the proposed resource management plan (RMP) presented in the final environmental impact statement (EIS) prepared for the Grand Resource Area (GRA) (December 1983). This Record of Decision (ROD) completes the EIS process, pursuant to 40 CFR 1505.2.

The proposed RMP for the GRA was selected from management actions analyzed in the RMP/EIS on the basis of (1) their ability to resolve the issues raised during the planning process; (2) the capability of the public lands to respond to management; (3) the environmental consequences of the alternatives and subalternatives; (4) the planning criteria; and (5) public input.

The RMP will serve as the basis to implement actions designed to resolve identified planning issues. The actions are summarized as follows.

- Management actions to resolve the Critical Watersheds issue include installation of instream drop structures in eight streams; implementation of salinity control treatments on 41,000 acres; diversion of Stinking Spring; and manipulation of vegetation and land and watershed treatments on three critical watershed subbasins.
- Management actions to resolve the Livestock Requirements issue include continuation of present management on 833,545 acres; implementation of livestock manipulation techniques on 793,031 acres; maintenance of existing land treatments; implementation of new land treatments on 67,125 acres; authorization of all grazing use at present levels (71,678 animal unit months (AUMs)) in conjunction with a monitoring program to determine whether stocking rates should be adjusted; a change in season of livestock use on 54,380 acres; a change in class of livestock on 69,042 acres; management of 3 miles of perennial streams to restore three riparian areas; and manipulation of livestock grazing on 27,000 acres to reduce salinity in the Colorado river.
- Management actions to resolve the Wildlife Habitat Requirements issue include maintenance of existing wildlife waters and reservation of unallocated forage and space on the following areas for deer and elk winter use: Pear Park, 14,720 acres; Spring Creek, 924 acres; and Castle Valley, 6,400 acres.
- Management actions to resolve the Off-Road Vehicle (ORV) Use and Management issue include designation of 1,183,660 acres as open to ORV use; designation of 596,234 acres as limited to existing roads and trails to protect watershed and scenic values; designation of 24,454 acres as closed to ORVs to protect scenic and recreation values; and designation of 15,206 acres as limited to designated roads and trails.
- Management actions to resolve the Lands Actions issue include retention of 1,801,331 acres of public land; possible disposal of 11,629 acres of public land to serve public objectives; and identification of 6,594 acres of public land for further study. An easement for public access will also be obtained at the Cisco boat launch.
- Management actions to resolve the Utility Corridors issue include the designation of approximately 140 miles of de facto corridors as official utility corridors and

identification of 48,245 acres in resource conflict areas to be avoided by major rights-of-way.

- Management actions to resolve the Minerals issue include leaving the entire GRA open to location of mining claims except for 1,850 acres of existing mineral withdrawals to protect recreation and scenic sites; maintenance of current potash leases on approximately 12,500 acres and allowance of potash prospecting (with potential for production) on an additional 142,100 acres; application of oil and gas categories to protect critical wildlife habitat, watersheds, and recreation; continuation of sales of common varieties of minerals; and allowance of sales of humates on 1,750 acres.

- Management actions to resolve the Recreation issue include maintenance of two developed campgrounds, five developed picnic areas, three scenic overlooks, 27 miles of scenic road system, 5 miles of hiking trail, and 10 miles of developed motorcycle trail; construction of rest rooms at seven heavily used recreation sites along the Colorado River; continued issuance of recreation permits; continuation of the existing river management program, continued management of 65 miles of the Colorado and Dolores river study corridors as required under the Wild and Scenic Rivers Act; and designation of 1,375 acres in Negro Bill Canyon as an Outstanding Natural Area (ONA).

- Management actions to resolve the Fire Management issue include implementation of a limited fire suppression policy on the entire GRA and initiation of prescribed fires and seeding on approximately 14,149 acres.

- Wilderness suitability recommendations are deferred pending completion of the Utah statewide wilderness EIS. (One wilderness study area (WSA) has been studied for wilderness suitability by Colorado BLM and will not be included in the Utah EIS.) WSAs will continue to be managed under the BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review (IMP) until either designated wilderness or released from study by Congressional action. Certain management actions in the RMP would apply to lands under wilderness review if they are not designated wilderness.

This Decision serves to designate the 1,375-acre Negro Bill Canyon ONA, to be managed under 43 CFR 8352. More specific management guidance will be provided as needed through development of an activity plan.

This Decision serves to designate the oil and gas leasing categories as described in the RMP. The stipulations given under each category will apply to all oil and gas leases issued after the date of this ROD.

This Decision serves to designate the utility corridors as described in the RMP.

This Decision meets the requirements of a court-ordered grazing analysis (Natural Resources Defense Council Inc. v. Morton, 388 F. Supp. 829 (1974)). Pursuant to BLM grazing regulations at 43 CFR 4100, a rangeland program summary (RPS) has been prepared to document anticipated management actions on each grazing allotment within the GRA. A monitoring program has been developed, as shown in the accompanying RMP, to provide the basis for future decisions regarding adjustments to livestock use of public lands.

This Decision will not alter or repeal valid existing rights. Claims or rights to use the public lands or resources existing at the time this RMP is adopted will continue to remain in effect until relinquished, terminated, or expired.

CHANGES FROM THE PROPOSED RMP AND FINAL EIS

The RMP contains certain changes from the proposed plan as presented in the final EIS. These reflect changes in policy, changes mandated by federal court, and other minor changes in circumstances.

Substantive changes are as follows. (Minor changes to improve clarity or correct errors are not listed.)

- Introduction: the introduction appearing in the proposed plan has been revised for clarity.
- Livestock Requirements: the acreage identified for implementation of new land treatments has been adjusted to reflect a land exchange with the State of Utah, which removed from BLM management 980 acres on which new land treatments were planned.
- Lands Actions: the planning criteria published in the draft EIS to guide lands actions refer to the Asset Management Program. This program has been discontinued. The planning criteria have been amended accordingly.
- Minerals: the acreage of existing potash leases and area available for potash prospecting have been adjusted to reflect the issuance of additional potash leases on approximately 7,900 acres in 1984.
- Minerals: the acreage available for sales of humates has been adjusted to reflect relinquishment of an area previously identified as a sale area. The applicant for a 250-acre sale area did not purchase the humate material. The tract remains suitable for sale of humates.
- Management of WSAs: an additional WSA was established in 1985 in response to a court order. The Lost Spring Canyon WSA was dropped from wilderness review in 1982 by Departmental order because it was less than 5,000 acres. This was reversed by a federal court, and the WSA was reinstated (Sierra Club v. Watt. Eastern District Court, California, Civil 5-83-035LRK (1985)). Under the same decision, a 135-acre parcel of split-estate lands was rejoined to the Behind the Rocks WSA.
- Management of WSAs: wilderness suitability recommendations have been deferred to the Utah statewide wilderness EIS with one exception. The Black Ridge Canyons West WSA has been studied by Colorado BLM. Wilderness suitability has been documented in the draft Grand Junction Resource Area Resource Management Plan and Environmental Impact Statement (March 1985). The WSA is identified as preliminarily suitable for wilderness designation, and is recommended as suitable for wilderness designation in the preferred alternative of the draft EIS.
- Management of WSAs: the planning criteria shown for wilderness in the draft EIS have been changed to better reflect the scope of the RMP.

ALTERNATIVES CONSIDERED

COMPARISON OF ALTERNATIVES

Four alternatives were developed and analyzed in the RMP/EIS. They were Alternative A, No Action; Alternative B, Production; Alternative C, Limited Protection; and Alternative D, Protection (refer to Appendix A). Alternative C was identified in the draft as the preferred alternative. Except for sections pertaining to livestock requirements, utility corridor avoidance areas, locatable minerals, humates, and wilderness, Alternative C has been selected as the RMP.

Two additional subalternatives pertaining to the Livestock Requirements issue were developed in the proposed RMP and final EIS in response to concerns expressed by the public. A Graze at Preference subalternative was incorporated into the Production alternative, and a Reduced Livestock Grazing subalternative was incorporated into the Protection alternative.

The management goals developed for the four alternatives analyzed in the RMP/EIS are summarized in Table 1. Separate goal statements for the subalternatives were not developed. The subalternatives represent different approaches within two of the alternatives discussed. The overall goals of the alternatives are thus the same as displayed in the draft document.

ENVIRONMENTAL PREFERABILITY

The EIS analyzed the impacts to the human environment that are expected from each of the four alternatives, all of which are environmentally acceptable and would meet the requirements of the National Environmental Policy Act (NEPA) and other environmental laws and policies. However, because each alternative has a different emphasis, each presents an environmentally preferable result for different components of the human environment.

Alternative A, No Action, would provide preferable short-term impacts to air quality.

Alternative B, Production, would provide preferable short-term impacts to the vegetation resource and would allow greater use of natural resources, leading to preferable impacts on the economic and social aspects of the human environment.

Alternative C, Limited Protection, poses a compromise between resource production and resource protection. It was chosen as the preferred alternative in the draft RMP/EIS because it was believed to best meet the BLM mandates to provide for multiple use while preventing unnecessary and undue degradation of resources on the public lands.

Alternative D, Protection, would generally provide preferable impacts to natural components of the human environment, but it does not meet Departmental and BLM policies of making natural resources, particularly minerals and grazing resources, available for public use.

RATIONALE

Alternative C provides the greatest mix of multiple uses of the public lands and resources, compared to the other alternatives analyzed in the RMP/EIS. The proposed RMP, as published in the final EIS, closely parallels Alternative C. Its implementation will result in beneficial impacts to soils, water quality, vegetation and livestock forage, wildlife habitat,

TABLE 1

Management Goals for the Alternatives

Alternative A No Action	Alternative B Production	Alternative C Limited Protection	Alternative D Protection
Goal: To continue the present level of resource use.	Goal: To implement a resource management plan that obtains the highest degree of consumptive use and commodity production allowable, considering legal constraints (environmental protection requirements, multiple use mandates, etc.).	Goal: To implement a resource management plan that provides a variety of uses within the sustained yield capability of the resource. It represents a balancing of conflicts between renewable and nonrenewable resources for the optimum multiple use mix, incorporating the necessary constraints for protecting renewble resources from irreversible decline.	Goal: To implement a resource management plan that is oriented toward protection and enhancement of the natural values, while allowing use and production only at levels that do not risk diminishing such values as wildlife habitat, critical watersheds, primitive recreation opportunities, and wilderness qualities.
	Trade-offs would emphasize consumptive uses (emphasize energy related mineral production, grazing, and development of commercial recreation, including ORV use).	Trade-offs would safeguard wildlife habitat, critical watersheds, wilderness values and non-ORV recreation, while accommodating production of minerals, livestock grazing, ORV recreation, and other commodities.	Trade-offs would favor protection of the reresource over use of the resource and would emphasize protection of wildlife habitat, critical watersheds, primitive recreation opportunities, and wilderness qualities.

and recreation facilities. Initially, livestock AUMs will be limited to the average of the past 5 years' licensed use; monitoring studies will be implemented to provide information to determine future stocking rates. Oil and gas category stipulations, ORV designations, and an ONA designation have been developed to protect sensitive natural values while permitting the majority of the GRA to remain open for resource use. Economic benefits from use of the public lands and resources will accrue to local communities, and no adverse social impacts are anticipated.

MITIGATION REQUIRED

MITIGATION MEANS

The RMP selected provides for mitigation of project-specific adverse impacts. All mitigation (see Appendix B) identified in the final EIS for Alternative C will be implemented. These measures are considered adequate, though many are standard operating procedures under current management.

IMPLEMENTATION

Management actions identified in the RMP will be implemented over a 10-year period, from

1985 to 1994. For some resource management programs, specific actions have been identified; for others, site-specific activity plans will be developed subsequent to implementation of this RMP (for example, allotment management plans (AMPs) and habitat management plans (HMPs)). Activity plans generally require preparation of an auxiliary environmental assessment to assess site-specific impacts prior to implementation.

MONITORING AND ENFORCEMENT

Both the adequacy of management actions identified in the RMP and the effectiveness of their implementation will be monitored over time. The results will be available for review by the public or governmental agencies.

The RMP provides for all practicable means to avoid or minimize adverse environmental impacts identified in the final EIS. A monitoring program has been set up to provide data on range condition (see the RPS section of this document). Implementation of other programs will be monitored, with monitoring plans to be established at the activity plan level or on a case-by-case basis in response to specific projects.

The effectiveness of the RMP in providing for wise management of the public lands and resources will be monitored and evaluated at periodic intervals not to exceed 5 years. The results of the plan will be measured against the RMP objectives and the planning criteria (refer to Appendix C).

CHANGES TO THE PLAN

The RMP may be changed through routine maintenance, amendment, or revision. All changes will be formally documented and will be available for review by the public or governmental agencies.

Plan maintenance will document implementation of management actions or minor changes to the RMP (such as refinement of acreage calculations). Documentation will not normally be subject to public review and comment, but will be kept on file at the resource area office.

Formal plan amendments will be prepared when necessary in response to a specific proposal. Plan revisions will formally change the guidance given in the RMP, in response to monitoring of the plan, new data, new or revised laws or policy, or other changes in the circumstances leading to adoption of this RMP. Plan amendments or revisions will be made in accordance with 43 CFR 1600 and the BLM planning manuals. Environmental impacts will be documented through an environmental assessment or an EIS. Plan amendments or revisions will be subject to public review.

THE RESOURCE MANAGEMENT PLAN

INTRODUCTION

PURPOSE AND NEED

The purpose of the RMP is to guide management of the public lands and resources in the GRA (see Figure 1). Section 202 of the Federal Land Policy and Management Act of 1976 (FLPMA) directs the Secretary of the Interior to develop, maintain, and revise land use plans for management of the public lands and their resources, with public involvement.

The primary need for the RMP is to provide the direction mandated by FLPMA. Accordingly, the BLM is required to develop and implement an RMP for each resource area. Preparation of the RMP is governed by the planning regulations given at 43 CFR 1610.4, by BLM Manual sections in the 1600 series, and by Utah State Office guidance. This RMP will be reviewed at 5-year intervals and revised or amended as necessary as provided in the ROD.

A second need for preparation of this plan is to meet the requirements for a site-specific grazing EIS ordered by the United States District Court, District of Columbia, in Natural Resources Defense Council Inc. v. Morton, 388 F. Supp. 829 (1974). The GRA grazing EIS was incorporated into the RMP/EIS; livestock management was identified as a required issue for impact analysis.

THE RESOURCE AREA

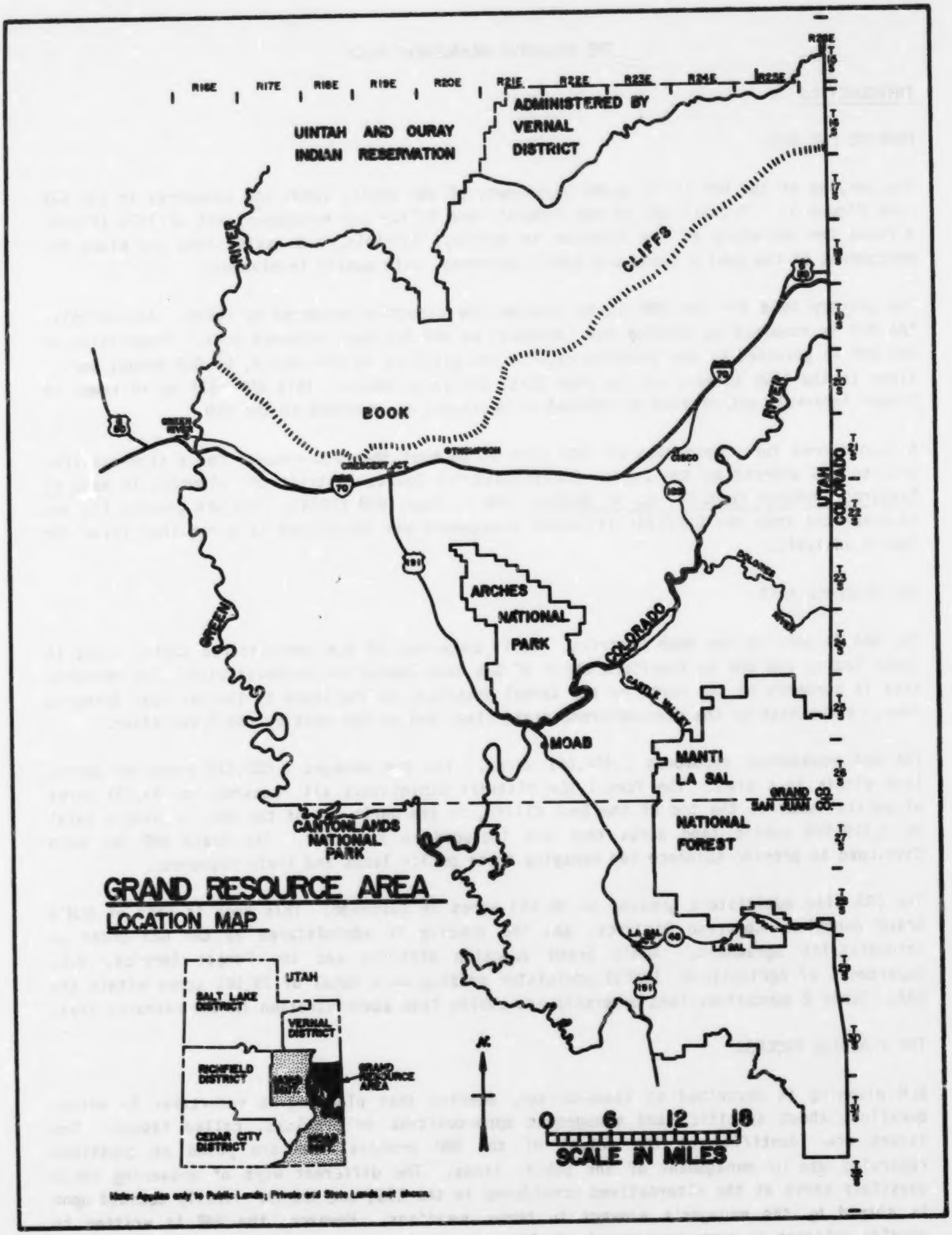
The GRA is part of the Moab District. It is comprised of BLM administered public lands in Grand County and the northeastern third of San Juan County in southeast Utah. The resource area is bordered on the north by the Vernal District, on the south by the San Juan Resource Area, on the east by the Utah-Colorado state line, and on the west by the Green River.

The GRA boundaries encompass 2,454,891 acres. The BLM manages 1,852,885 acres of public land within this area. The Vernal BLM District administers all resources on 33,331 acres of public lands at the top of the Book Cliffs, in the north end of the GRA, leaving a total of 1,819,554 public land acres that are included in this RMP. The Grand RMP has been developed to provide guidance for managing these public lands and their resources.

The GRA also administers grazing on 40,653 acres in Colorado. This area is part of BLM's Grand Junction, Colorado District, and the grazing is administered by the GRA under an interdistrict agreement. BLM's Grand Junction District and the Forest Service, U.S. Department of Agriculture, (USFS) administer grazing on a total of 79,581 acres within the GRA. Table 2 summarizes land ownership and public land administration in the resource area.

THE PLANNING PROCESS

BLM planning is described as issue-driven, meaning that planning is undertaken to answer questions about specific land management opportunities or problems, called issues. The issues are identified at the outset of the RMP process, and are posed as questions regarding use or management of the public lands. The different ways of answering these questions serve as the alternatives considered in the EIS, and the RMP finally decided upon is shaped by the manager's answers to those questions. However, the RMP is written to provide guidance to cover management of all resources throughout the entire resource area.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ADMINISTERED BY
VERNAL
DISTRICT
UINTAH AND OURAY
INDIAN RESERVATION
CLIFFS
BOOK
GREEN
RIVER
GREEN RIVER
THOMPSON
CRESCENT JCT.
CISCO
RIVER
DOLORES
RIVER
70
191
6
50
128
46
ARCHES
NATIONAL
PARK
COLORADO
CASTLE VALLEY
MOAB
MANTI
LA SAL
NATIONAL
FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS
NATIONAL
PARK
LA SAL
UTAH
COLORADO
GRAND RESOURCE AREA
LOCATION MAP
UTAH
SALT LAKE
DISTRICT
VERNAL
DISTRICT
RICHFIELD
DISTRICT
CEDAR CITY
DISTRICT
MOAB
DIST.
GRAND
RESOURCE
AREA
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0
6
12
18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.

FIGURE 1

Grand Resource Area General Location Map

TABLE 2

Land Ownership and Public Land Administration

Acres of Public Land in the GRA	Utah	Colorado
Administered by GRA in grazing allotments	1,711,529	40,653
Administered by GRA but not within an allotment	28,444	
[a]Administered by Vernal BLM	33,331	
[b]Grazing administered by Grand Junction BLM	76,613	
Grazing administered by USFS	2,968	
Acres of State Land in the GRA	432,519	
Acres of Private Land in the GRA	169,487	

[a] Included in the Book Cliffs final RMP/EIS, Vernal District, November 1984.

[b] A livestock grazing EIS was completed on this area by BLM's Grand Junction District in 1979.

Under the planning regulations at 43 CFR 1610.4, the preparation and implementation of an RMP is completed in nine steps (see Figure 2.) These are: (1) identification of issues; (2) development of planning criteria; (3) collection of inventory data and information; (4) analysis of the management situation; (5) formulation of alternatives; (6) estimation of effects of alternatives; (7) selection of the preferred alternative: (8) selection of the RMP; and (9) monitoring and evaluation.

Five documents are completed during preparation of the RMP to record the planning process. These documents are: the RMP preparation plan; the management situation analysis (MSA); the draft RMP/EIS; the proposed RMP and final EIS; and the record of decision and final RMP. Each document serves as a foundation for the one following. These documents contain a great deal of information about the GRA. Persons using this plan may want to consult the MSA or RMP/EIS for additional details regarding resources present, as well as past management practices.

The RMP provides resource management guidance that has been taken either directly from the current management described in the MSA or from resolution of the planning issues in the EIS. An RPS, required by BLM policy to brief the public on range management decisions and monitoring by grazing allotment, has been combined with the ROD and RMP.

PLANNING ISSUES

Planning issues, which are the foundation of the BLM planning process, can be defined as concerns centering around unresolved questions or topics. The Grand RMP focuses on the following ten planning issues, which represent problem areas where management effort needs to be concentrated:

Critical Watersheds
Livestock Requirements
Wildlife Habitat Requirements
ORV Use and Management
Lands Actions
Utility Corridors
Minerals
Recreation
Fire Management
Management of WSAs

These topics encompass concerns identified by members of the public, other agencies, entities of State and local governments, and BLM managers.

Planning criteria (see Appendix C) were developed for each issue to guide the development of the RMP, and will be reviewed prior to revision or amendment of the RMP.

Planning issues are summarized as follows:

Critical Watersheds

The Critical Watersheds issue revolves around (1) sedimentation and salinity in the upper Colorado River basin from public lands in the GRA and (2) disturbance and degradation of critical watersheds and floodplains.

Livestock Requirements

The Livestock Requirements issue is concerned with four basic conflicts: (1) mineral activities are causing a loss of forage for livestock in specific heavy use areas; (2) ORV

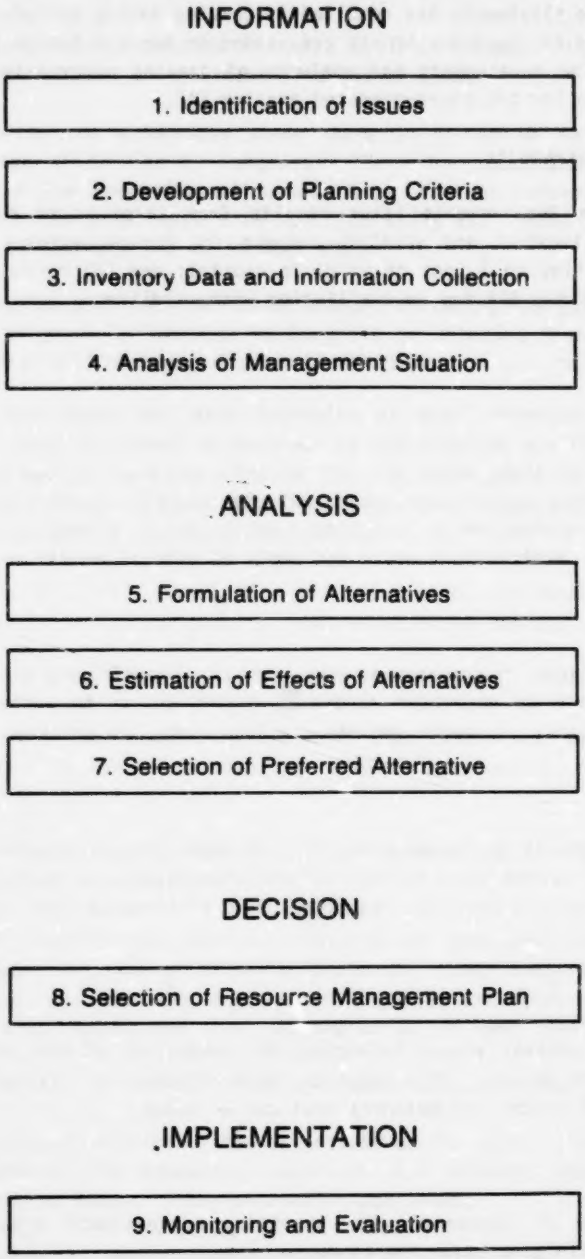

INFORMATION
1. Identification of Issues
2. Development of Planning Criteria
3. Inventory Data and Information Collection
4. Analysis of Management Situation
ANALYSIS
5. Formulation of Alternatives
6. Estimation of Effects of Alternatives
7. Selection of Preferred Alternative
DECISION
8. Selection of Resource Management Plan
IMPLEMENTATION
9. Monitoring and Evaluation

FIGURE 2

Prescribed Resource Management Planning Actions activity is causing a loss of forage for livestock in specific heavy use areas; (3) improper season of use on some allotments has resulted in grazing during periods critical to the growth of forage plants; and (4) land treatments are needed to improve forage and better disperse and manage livestock. The development and analysis of grazing alternatives for this issue must meet the requirements for the court-mandated grazing EIS.

Wildlife Habitat Requirements

The Wildlife Habitat Requirements issue results from three basic conflicts: (1) in some parts of the GRA, livestock and wildlife compete for forage, water, and space; (2) mineral activities are resulting in a loss of wildlife habitat; and (3) recreational uses such as ORV travel in portions of the GRA may be conflicting with wildlife.

ORV Use and Management

The ORV Use and Management issue is concerned with evaluation and categorization of the public lands into ORV use designations as required by Executive Order 11644. The categories include an open designation, where the use of ORVs would be allowed subject only to general restrictions; a limited designation, where ORV use would be subject to specific restrictions such as staying on designated or existing routes; and a closed designation where ORV use would be prohibited. Restrictions would not apply to authorized ORV use.

Lands Actions

The Lands Actions issue is concerned with (1) the identification of lands suitable for disposal, (2) the need to guarantee continued public access to whitewater rafting, and (3) supporting the protection of scenic and other values along the Colorado and Dolores rivers.

Utility Corridors

The Utility Corridors issue focuses on (1) the need for designated utility corridors to alleviate congestion caused by existing and proposed rights-of-way and (2) identification of avoidance areas to protect critical resources from disturbance that would occur within such corridors.

Minerals

The Minerals issue revolves around balancing the production of minerals with the protection of sensitive resource values. This requires identification of (1) areas and values in need of protection and (2) protective measures that can be taken.

Recreation

The Recreation issue is concerned with providing recreational opportunities to meet the increasing demand while protecting the resource base.

Fire Management

The Fire Management issue is based on the use of fire as a mangement tool. Full suppression of all fires can be costly and does not always benefit rangeland resources; lands with potential for improvement through the use of induced or natural fires need to be identified.

Management of WSAs

The BLM wilderness review process consists of three distinct phases: inventory, study, and reporting. The inventory resulted in the identification of WSAs.

The role of the RMP during the wilderness study phase is to define how the WSAs would be managed if not designated wilderness by Congress. The wilderness suitability of each WSA will be addressed in the Utah statewide wilderness EIS. Further information about each of the WSAs is contained in the wilderness site-specific analyses. These documents have been published in draft form to document the wilderness study.

Areas under wilderness review will continue to be managed following the guidance of BLM's IMP, until they are either designated wilderness by Congress or released from wilderness review. Areas designated wilderness will be managed under 43 CFR 8560.

GOALS AND OBJECTIVES

The goal of the plan is to provide for multiple uses on the public lands while balancing conflicts between renewable and nonrenewable resources and incorporating the necessary constraints to protect renewable resources from irreversible decline.

Trade-offs help safeguard wildlife habitat, critical watersheds, and nonmotorized recreation, while accommodating minerals, livestock grazing, and recreational ORV use.

Management actions to resolve the planning issues have the following objectives:

- to reduce the impact of surface disturbing activities on critical watersheds while enhancing water quality and protecting key saline-alkali soils, riparian areas, floodplains, and municipal watersheds;
- to emphasize livestock use while improving or maintaining vegetative conditions to benefit both livestock and wildlife;
- to manage wildlife habitat to favor a diversity of game and nongame wildlife species, support Utah Division of Wildlife Resources (UDWR) long-range management goals for deer, elk, and antelope, and protect riparian and other areas important to wildlife (including raptors and other nongame birds and game fish);
- to provide opportunities for ORV use while protecting sensitive resources;
- to retain public lands in support of the objectives of the other resource management programs, provide for community expansion and economic development, and ensure continued public access to key recreation use areas;
- to provide a network of designated corridors for existing and future utility systems while designating utility avoidance areas to protect other resource values and programs;
- to keep public lands open for exploration and development of mineral resources while protecting areas with sensitive resource values;

- to accommodate the expanding recreation use while reducing the impacts on the recreation resource base;
- to implement a limited fire suppression policy and initiate prescribed fires where treatment by fire would increase vegetation productivity, while safeguarding resource values, life, and property; and
- to define how the WSAs will be managed if not designated wilderness by Congress.

MANAGEMENT ACTIONS

The following management actions will be implemented to achieve the goals and objectives developed for this plan and should resolve the concerns described for each planning issue. Management actions are mapped in detail on RMP overlays (scale: 0.5 inch = 1 mile) located at the GRA office.

CRITICAL WATERSHEDS

Install instream drop structures in eight streams (about 3,500 acres, eight allotments) to decrease sedimentation and improve water quality. Figure 3 shows the general locations of watershed projects.

Implement salinity control treatments (gully plugs, contour furrows, retention dams) on 41,000 acres (in ten allotments), to reduce salinity contribution to the Colorado River system by about 5,000 tons annually.

Divert and evaporate water from Stinking Spring to reduce salinity contribution to the Colorado River system by about 3,100 tons annually.

Manipulate vegetation and initiate land and watershed treatments on three critical watershed subbasins (313,800 acres) to improve poor watershed conditions.

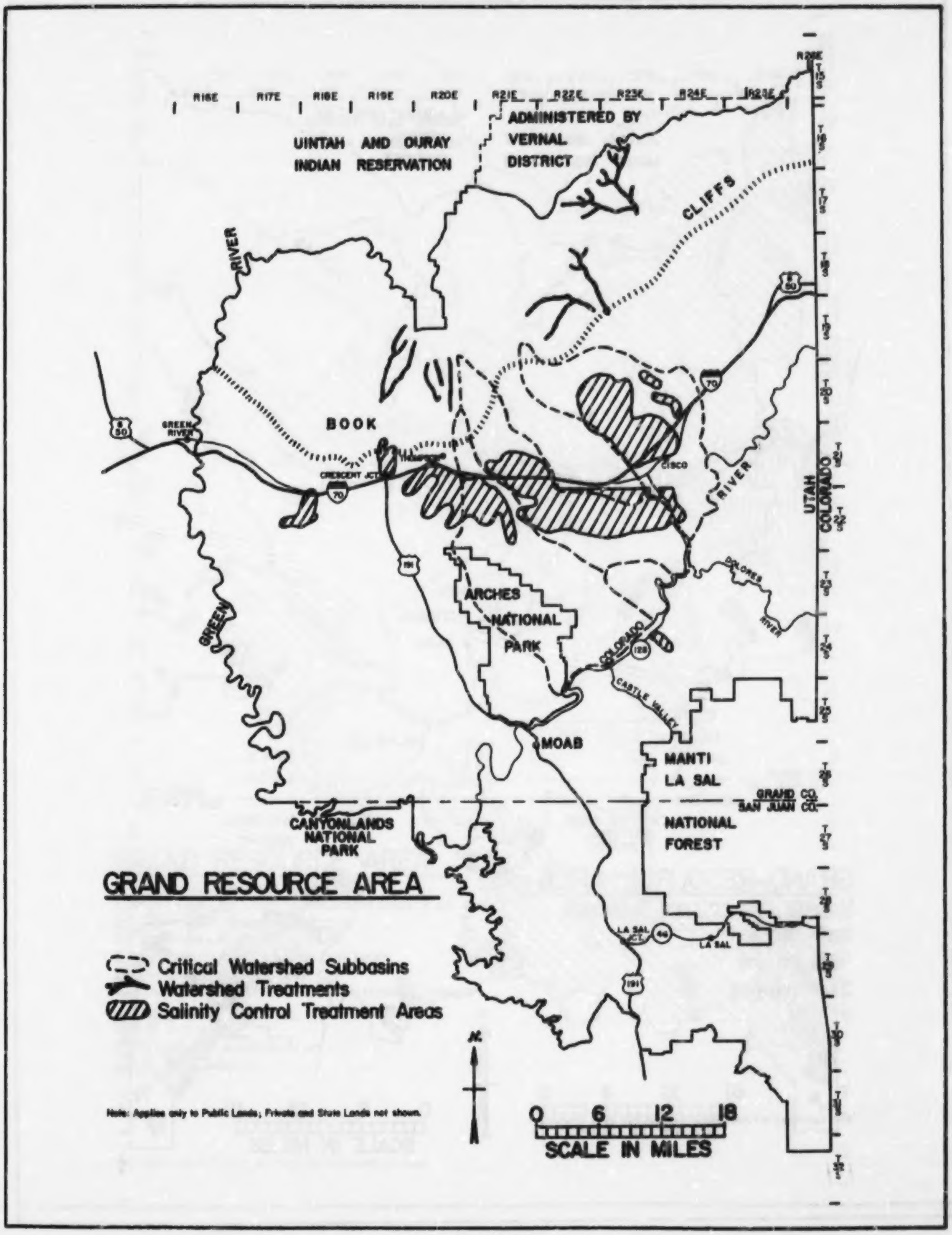
LIVESTOCK REQUIREMENTS

Continue present management on 833,545 acres (in 37 allotments) to benefit livestock and wildlife by maintaining and improving present medium to high ecological condition. Figures 4 and 5 show the general locations of livestock management actions. The allotments within which this action and the other grazing management actions will take place are listed in Appendix D.

Implement livestock manipulation techniques (fences, water developments, rotation of grazing use areas) to benefit livestock and wildlife by improving present low ecological condition in heavy use areas and by maintaining and improving present medium to high ecological condition on 793,031 acres (in 24 allotments).

Maintain existing land treatments on 11 allotments to provide forage for livestock and wildlife. These are: (a) 25,766 chained acres; (b) 25,198 plowed acres; and (c) 1,025 sprayed acres.

Implement land treatments on 67,125 acres (13 allotments) to increase available forage by 8,514 AUMs, to allow increased use by livestock and wildlife. The increase in AUMs will be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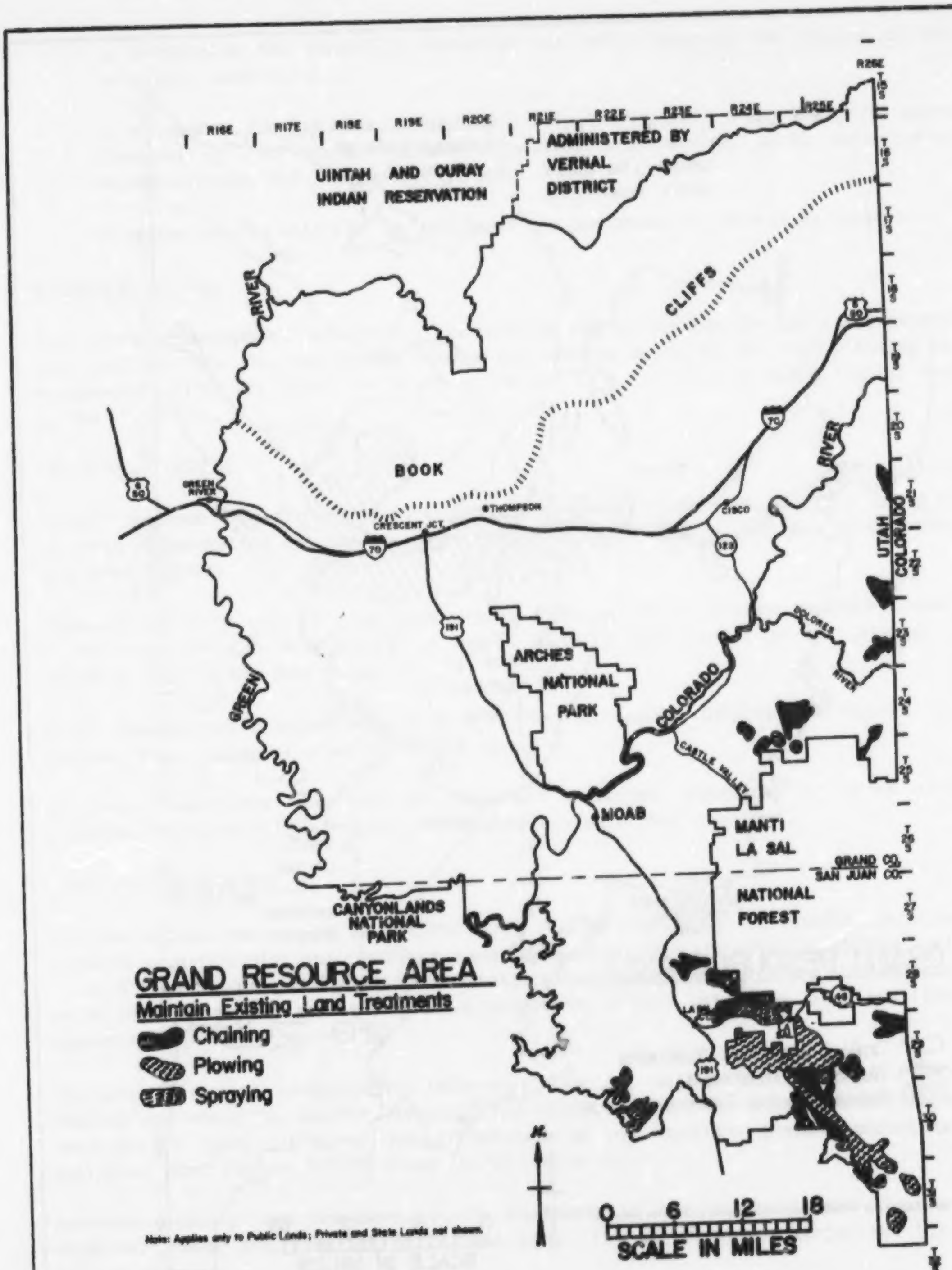
UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
CLIFFS
GREEN RIVER
BOOK
GREEN RIVER
50
CRESCENT JCT
70
191
CISCO
RIVER
UTAH
COLORADO
DOLORES RIVER
ARCHES NATIONAL PARK
COLORADO
128
CASTLE VALLEY
MOAB
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS NATIONAL PARK
LA SAL JCT.
46
LA SAL
GRAND RESOURCE AREA
Critical Watershed Subbasins
Watershed Treatments
Salinity Control Treatment Areas
Note: Applies only to Public Lands; Private and State Lands not shown.
N
0
6
12
18
SCALE IN MILES

FIGURE 3

Management of Critical Watersheds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T 31 S
T 32 S
UINTAH AND OURAY
INDIAN RESERVATION
ADMINISTERED BY
VERNAL
DISTRICT
CLIFFS
BOOK
GREEN RIVER
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6
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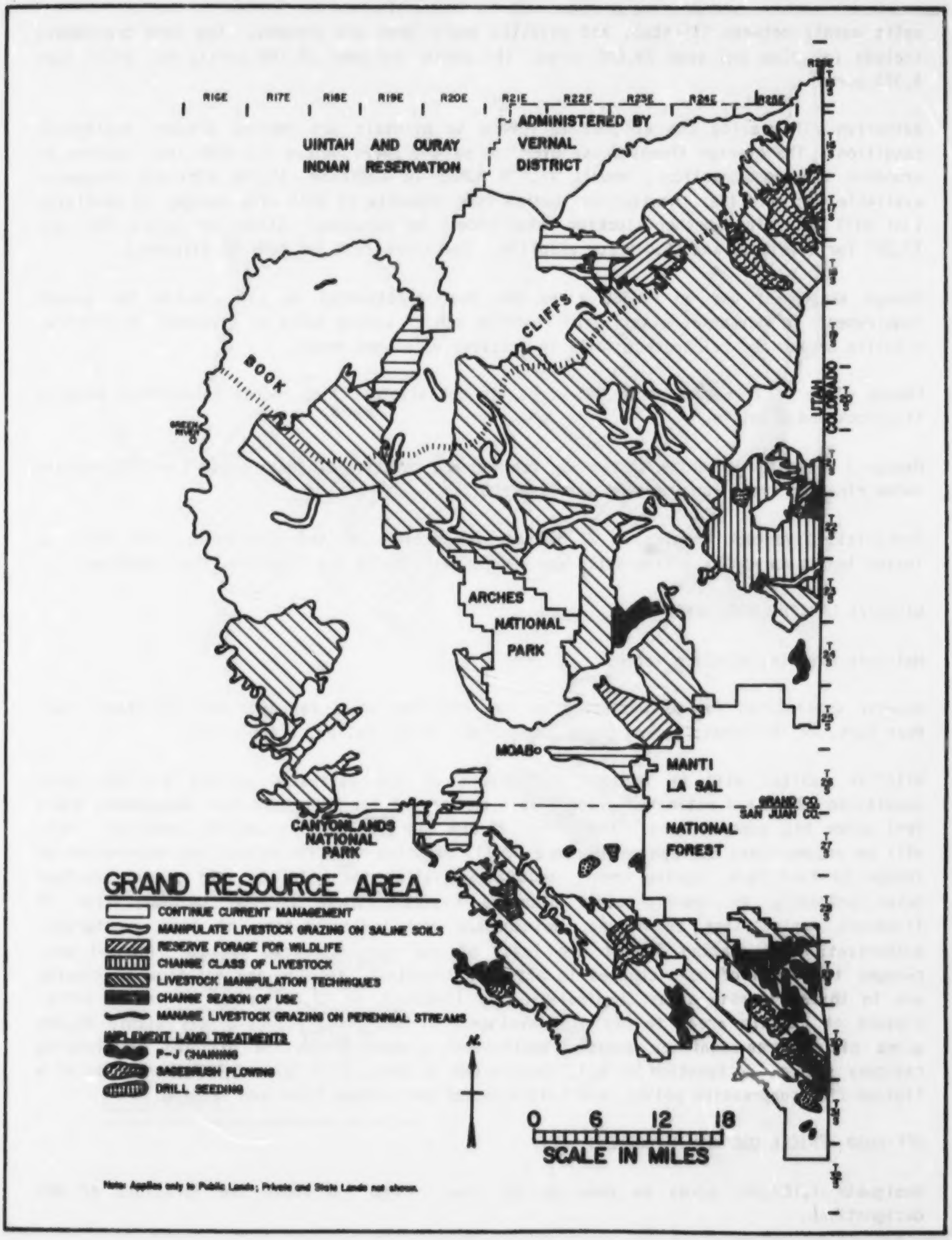
46
GREEN
CRESCENT JCT.
THOMPSON
CISCO
RIVER
UTAH
COLORADO
DOLORES
RIVER
ARCHES
NATIONAL
PARK
COLORADO
CASTLE VALLEY
MOAB
MANTI
LA SAL
GRAND CO.
SAN JUAN CO.
NATIONAL
FOREST
CANYONLANDS
NATIONAL
PARK
LA SAL
GRAND RESOURCE AREA
Maintain Existing Land Treatments
Chaining
Plowing
Spraying
N
0
6
12
18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.

FIGURE 4

Existing Land Treatments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R24E
R25E
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UINTAH AND OURAY
INDIAN RESERVATION
ADMINISTERED BY
VERNAL
DISTRICT
BOOK
CLIFFS
GREEN RIVER
UTAH
COLORADO
ARCHES
NATIONAL
PARK
MOAB
MANTI
LA SAL
NATIONAL
FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS
NATIONAL
PARK
GRAND RESOURCE AREA
CONTINUE CURRENT MANAGEMENT
MANIPULATE LIVESTOCK GRAZING ON SALINE SOILS
RESERVE FORAGE FOR WILDLIFE
CHANGE CLASS OF LIVESTOCK
LIVESTOCK MANIPULATION TECHNIQUES
CHANGE SEASON OF USE
MANAGE LIVESTOCK GRAZING ON PERENNIAL STREAMS
IMPLEMENT LAND TREATMENTS
P-J CHAINING
SAGEBRUSH PLOWING
DRILL SEEDING
N
0
6
12
18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.

FIGURE 5

Management of Livestock Grazing

split evenly between livestock and wildlife where both are present. New land treatments include (a) plow and seed 29,640 acres; (b) chain and seed 32,160 acres; (c) drill seed 5,325 acres.

Authorize all grazing use at present levels to maintain and improve present ecological condition. The average licensed use over the past 5 years, minus the AUMs lost because of proposed management actions, equals 71,678 AUMs; in addition, 11,314 AUMs are presently available for wildlife. Monitoring studies (see Appendix E) will show changes in condition that will determine whether stocking rates should be adjusted. Estimated future AUMs are 77,296 for livestock and 16,016 for wildlife. See Appendix D for AUMs by allotment.

Change season of use on 54,380 acres (in four allotments) to (a) provide for growth requirements of perennial plants; (b) restrict use of spring forbs by livestock in critical wildlife areas; and (c) protect soils in critical watershed areas.

Change class of livestock on 69,042 acres (in one allotment) to reduce competition between livestock and wildlife.

Manage 3 miles of perennial streams by fencing and rotation of grazing use areas to restore three riparian areas for improved wildlife habitat.

Manipulate livestock grazing on 27,000 acres (portions of ten allotments; 558 AUMs) to lessen impact on highly saline soils and reduce salinity in the Colorado River drainage.

WILDLIFE HABITAT REQUIREMENTS

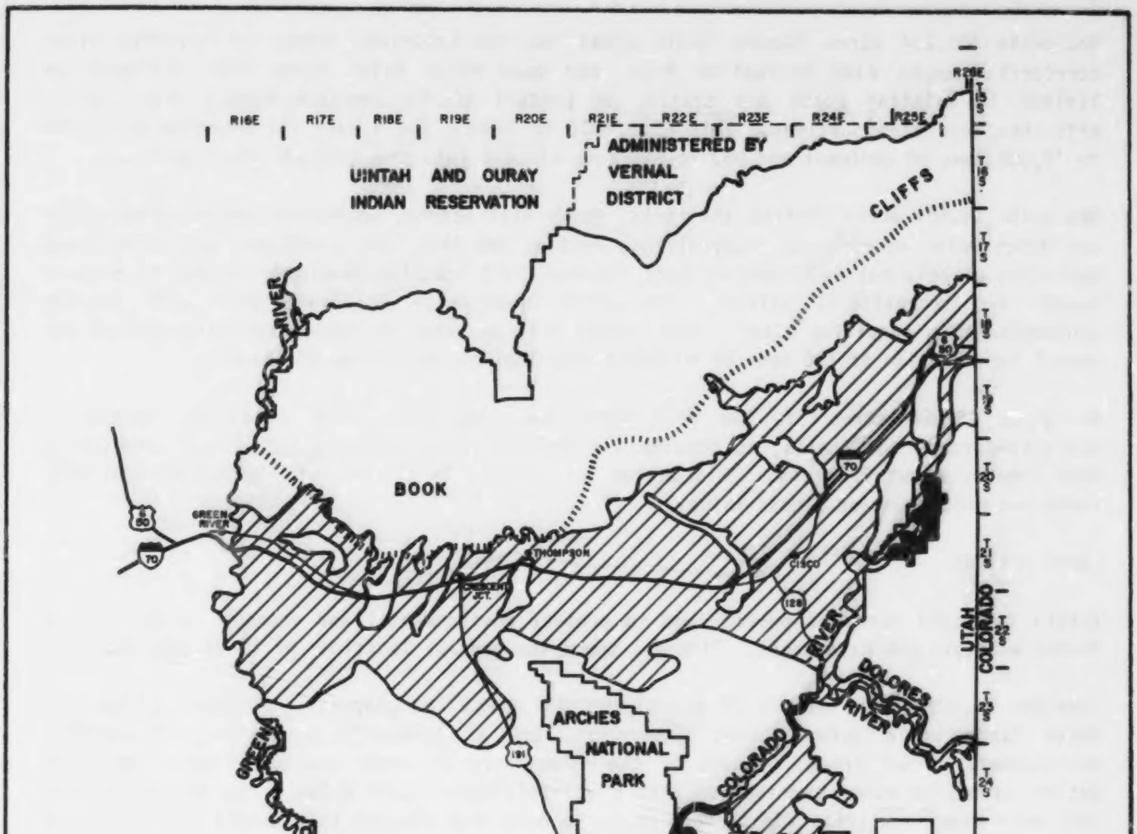
Maintain existing wildlife waters.

Reserve unallocated forage and space on the following areas for deer and elk winter use: Pear Park, 14,720 acres; Spring Creek, 924 acres; Castle Valley, 6,400 acres.

Wildlife habitat will be managed in support of the estimated current bighorn sheep population (259) and estimated prior stable numbers of (or long-term herd management goals for) other big game species. These are: 22,250 deer; 2,300 elk; and 887 antelope. This will be accomplished through maintenance of all existing wildlife waters and reservation of forage in Pear Park, Spring Creek, and Castle Valley for wildlife, and certain actions taken primarily to resolve other planning issues. These include implementation of livestock manipulation techniques, maintenance and implementation of land treatments, authorization of grazing use at the level of the past 5 years' average licensed use, changes in season of use, changes in class of livestock, fencing and rotation of grazing use in three riparian areas, manipulation of livestock on 27,000 acres of saline soils, closure of certain areas to ORV use, avoidance of situating rights-of-way within 48,245 acres of resource conflict areas, adoption of a more protective oil and gas leasing category system, designation of a 1,375-acre ONA in Negro Bill Canyon, implementation of a limited fire suppression policy, and initiation of prescribed fires and seeding.

OFF-ROAD VEHICLE USE AND MANAGEMENT

Designate 1,183,660 acres as open to ORV use. Figure 6 shows the locations of ORV designations.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R26E
UINTAH AND OURAY
INDIAN RESERVATION
ADMINISTERED BY
VERNAL
DISTRICT
CLIFFS
BOOK
GREEN RIVER
RIVER
70
6
50
THOMPSON
CRESCENT JCT.
CISCO
128
UTAH
COLORADO
RIVER
DOLORES
RIVER
COLORADO
ARCHES
NATIONAL
PARK
191
GREEN
CASTLE VALLEY
MOAB
MANTI
LA SAL
GRAND CO.
SAN JUAN CO.
NATIONAL
FOREST
CANYONLANDS
NATIONAL
PARK
LA SAL JCT.
46
LA SAL
GRAND RESOURCE AREA
LIMITED TO EXISTING ROADS AND TRAILS
LIMITED TO DESIGNATED ROADS AND TRAILS
CLOSED
OPEN
Note: Applies only to Public Lands; Private and State Lands not shown.
N.
0
6
12
18
SCALE IN MILES
T15S
T16S
T17S
T18S
T19S
T20S
T21S
T22S
T23S
T24S
T25S
T26S
T27S
T28S
T29S
T30S
T31S
T32S

FIGURE 6

Off-Road Vehicle Use Designations

Designate 596,234 acres (Mancos Shale areas and the Colorado, Green, and Dolores river corridors, Canyon Rims Recreation Area, and Dead Horse Point State Park viewshed) as limited to existing roads and trails, to protect highly erodible Mancos Shale soils, watershed, and scenic values. This will help to reduce the annual introduction of 12,000 to 18,000 tons of sediment and 363 to 548 tons of salt into the Colorado River drainage.

Designate 24,454 acres (Behind the Rocks, Negro Bill Canyon, Westwater Canyon, Windwhistle and Hatch Point campgrounds, Canyonlands, Needles and Anticline overlooks, and Onion Creek sensitive plant site) as closed to ORVs (in areas off existing developed roads), to protect scenic and recreational values. The Onion Creek site enclosure will also provide protection to a sensitive plant. This action will be taken to reduce soil erosion and the annual introduction of 100 tons of sediment into the Colorado River drainage.

Designate 15,206 acres (in the Mill Creek and East Mill Creek area) as limited to designated roads and trails, to provide for ORV use while reducing annual soil erosion in this area by about 200 tons. This action will result in closure of 7 miles of duplicate roads and protection of scenic values.

LANDS ACTIONS

Retain 1,801,331 acres of public land to protect environmental and economic assets and to foster multiple use management. Figure 7 shows the general locations of lands actions.

Consider 11,629 acres (within 12 allotments; 153 AUMs) for disposal. Disposal of some of these lands would serve public objectives such as community expansion and economic development. Other lands, because of their locations or other characteristics, would be better suited to other ownership. Also shown in Figure 6 are 6,594 acres of public land that have been identified for further study to determine whether they should be retained or disposed of.

Acquire an access easement on 6 acres of private land at the Cisco boat launch area for the purpose of providing public access to Westwater Canyon for recreational boating.

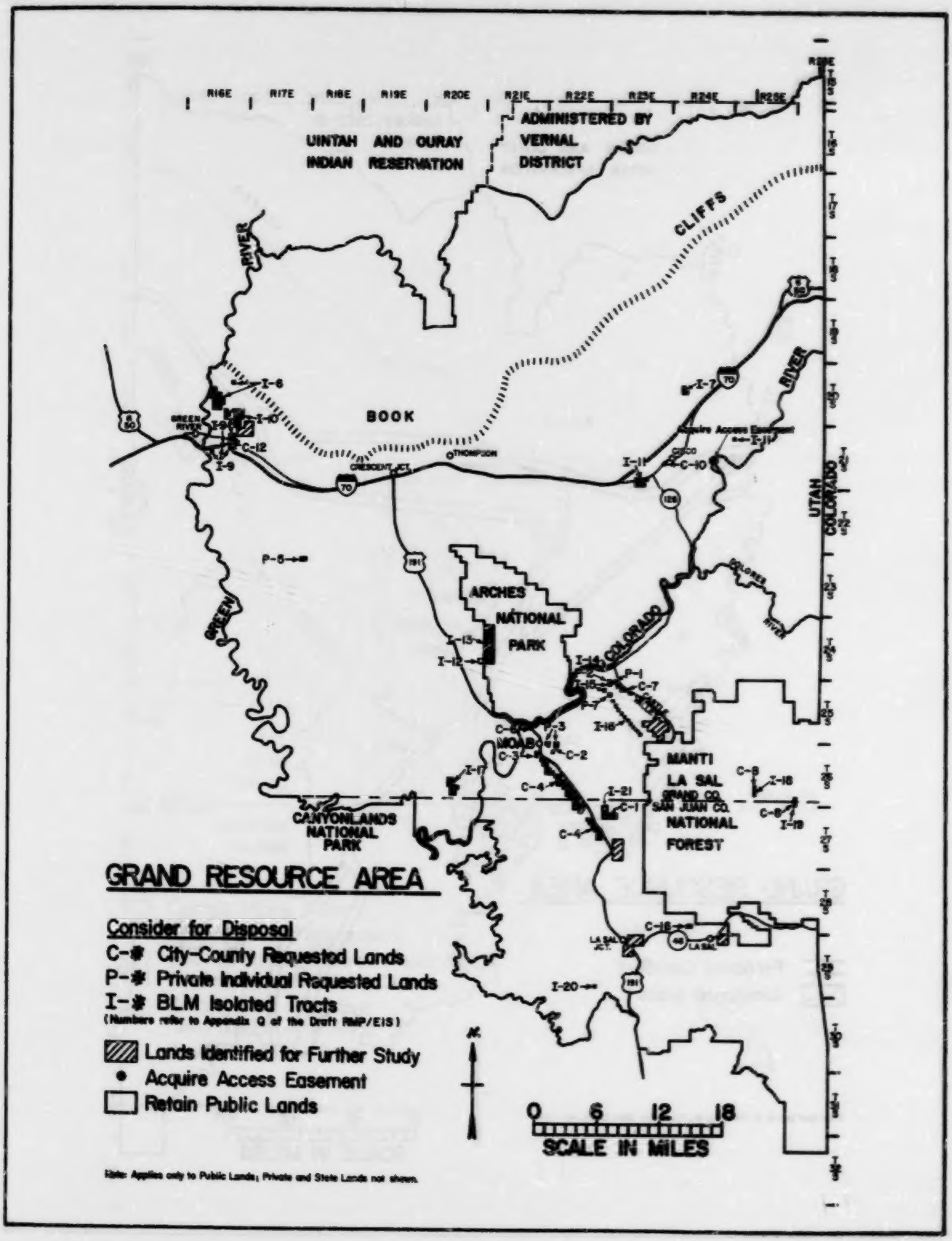
UTILITY CORRIDORS

Designate approximately 140 miles (16,000 acres) of de facto corridors as official utility corridors. Such designation will minimize both the adverse environmental impacts and the proliferation of separate rights-of-way. It will also help minimize width requirements and maximize multiple occupancy. Figure 8 shows the locations of utility corridor management actions.

Avoid situating major rights-of-way within 48,245 acres in resource conflict areas to protect critical bighorn sheep habitat.

MINERALS

Leave the entire GRA (1.8 million acres) open to mining claims for locatable minerals under the General Mining Laws, with the exception of 1,850 acres of widely scattered campgrounds and scenic sites under existing mineral withdrawals. Figures 9 and 10 show the general locations of minerals management actions.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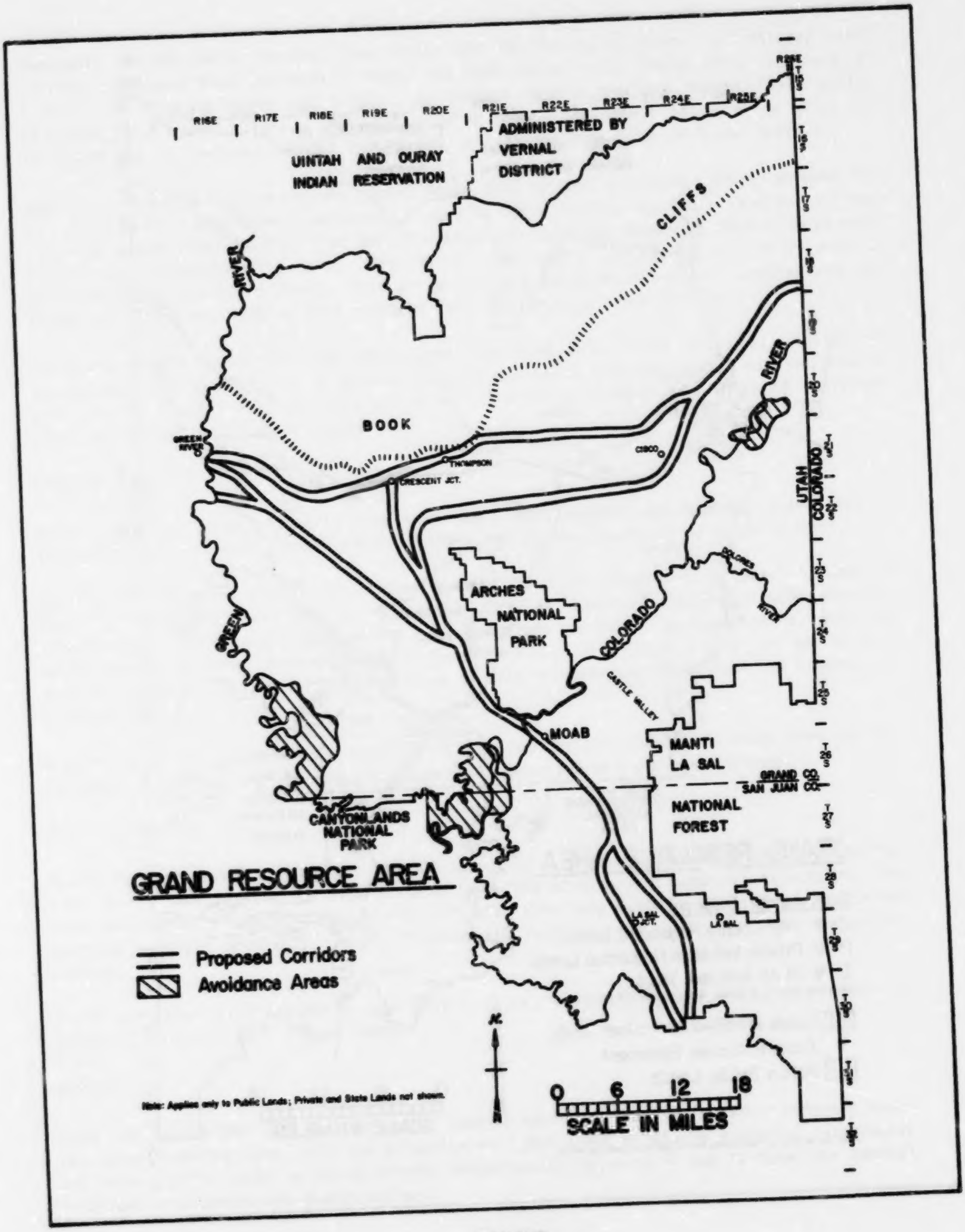
R25E
R26E
UINTAH AND OURAY
INDIAN RESERVATION
ADMINISTERED BY
VERNAL
DISTRICT
CLIFFS
BOOK
RIVER
GREEN
GREEN RIVER
I-6
I-10
C-12
I-9
CRESCENT JCT.
THOMPSON
70
I-7
RIVER
Acquire Access Easement
I-11
CISCO
C-10
128
UTAH
COLORADO
P-5
191
ARCHES
NATIONAL
PARK
I-13
I-12
I-14
COLORADO
P-1
C-7
P-7
I-16
DOLORES
RIVER
MOAB
P-3
C-3
C-2
I-17
C-4
I-21
C-1
MANTI
LA SAL
GRAND CO.
SAN JUAN CO.
NATIONAL
FOREST
C-5
I-18
C-6
I-19
CANYONLANDS
NATIONAL
PARK
LA SAL JCT.
C-18
46
LA SAL
I-20
GRAND RESOURCE AREA
Consider for Disposal
C-# City-County Requested Lands
P-# Private Individual Requested Lands
I-# BLM Isolated Tracts
(Numbers refer to Appendix Q of the Draft RMP/EIS)
▨ Lands Identified for Further Study
● Acquire Access Easement
☐ Retain Public Lands
N
0
6
12
18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.
T15S
T16S
T17S
T18S
T19S
T20S
T21S
T22S
T23S
T24S
T25S
T26S
T27S
T28S
T29S
T30S
T31S
T32S

FIGURE 7

Lands Actions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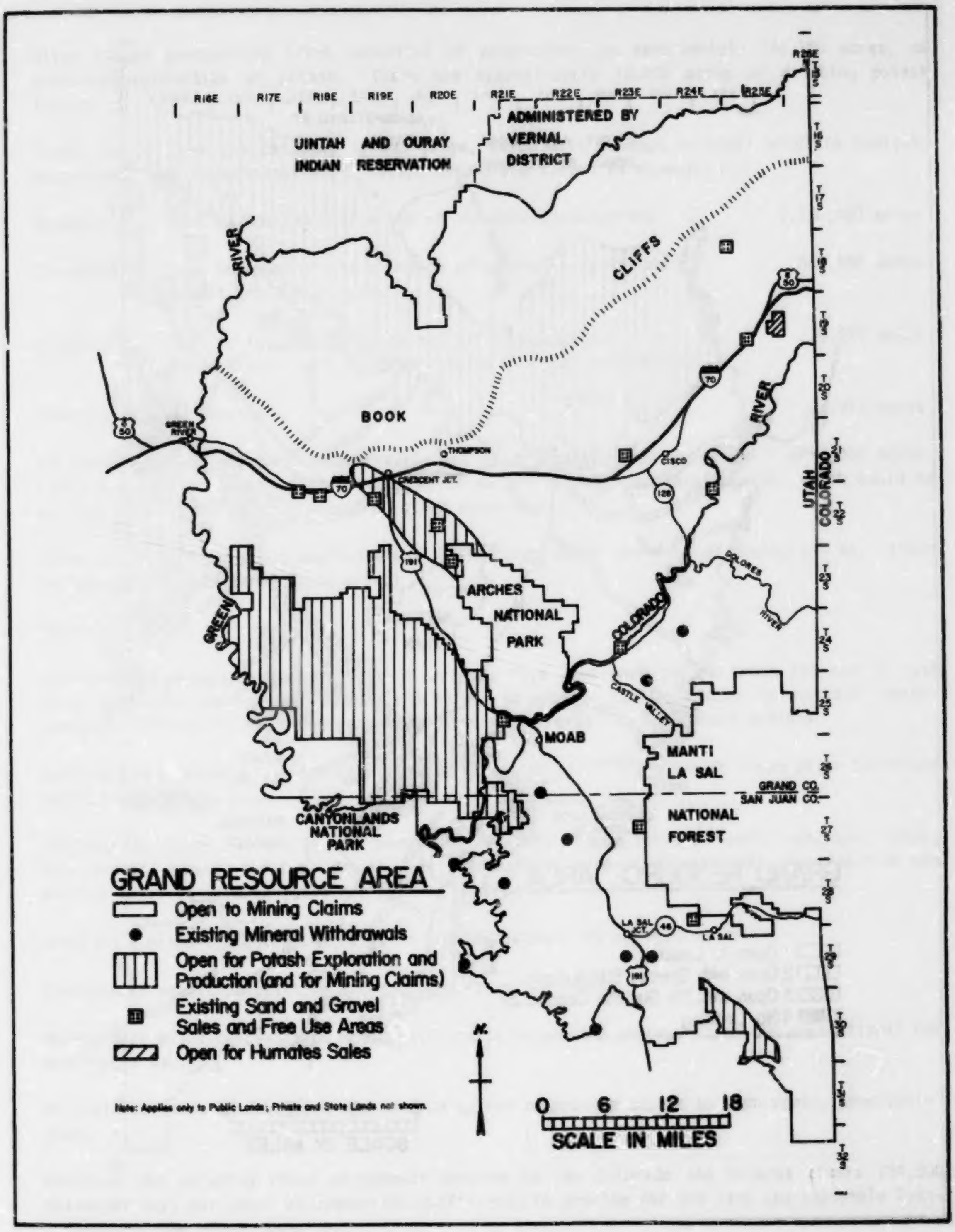
UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
CLIFFS
BOOK
GREEN RIVER
RIVER
THOMPSON
CRESCENT JCT.
CISCO
RIVER
UTAH
COLORADO
ARCHES NATIONAL PARK
COLORADO
DOLORES RIVER
CASTLE VALLEY
MOAB
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
GREEN
CANYONLANDS NATIONAL PARK
LA SAL JCT.
LA SAL
GRAND RESOURCE AREA
Proposed Corridors
Avoidance Areas
N
0 6 12 18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.

FIGURE 8

Utility Corridors and Avoidance Areas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R26E
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ADMINISTERED BY VERNAL DISTRICT
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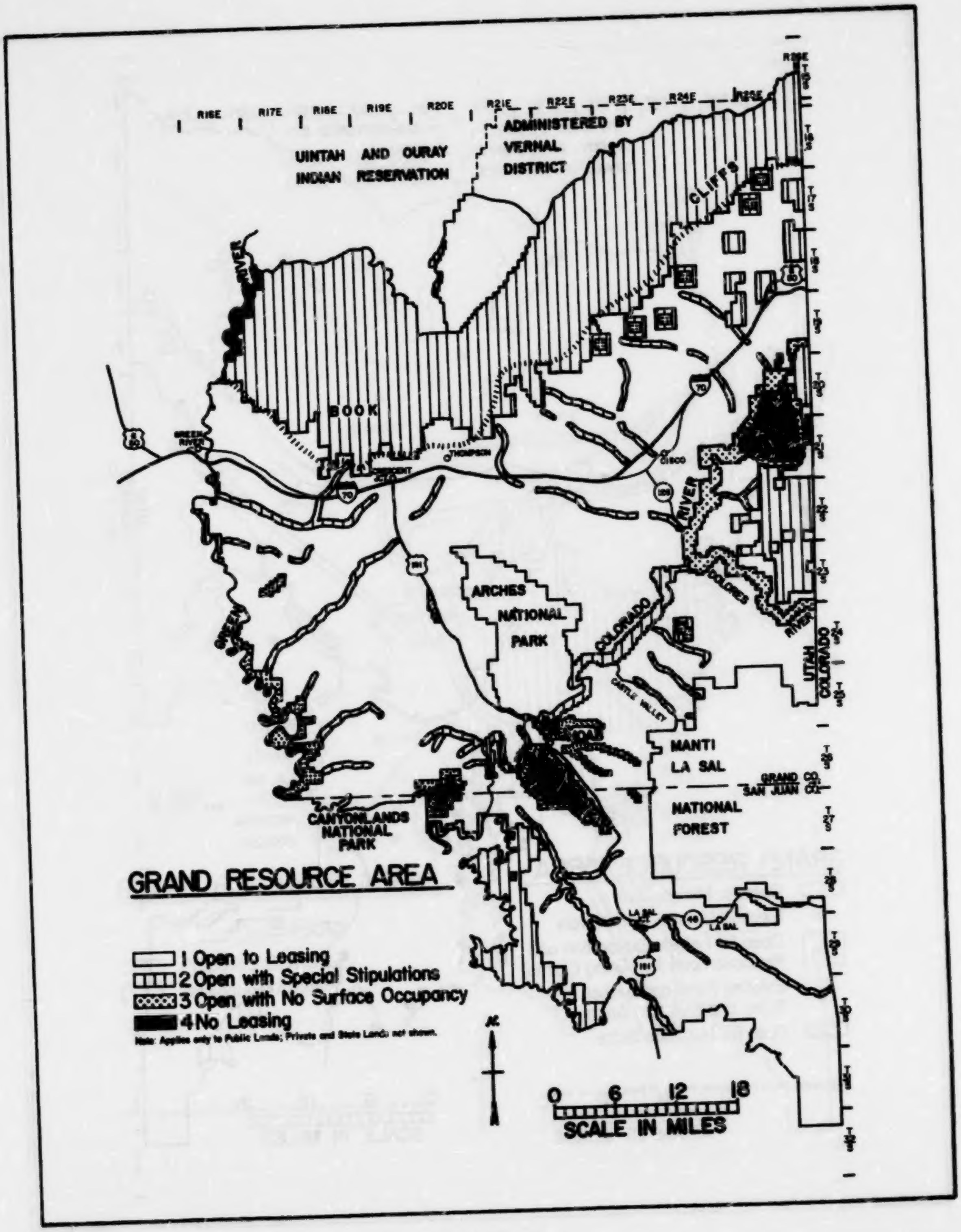
T 23 S
T 24 S
T 25 S
T 26 S
T 27 S
T 28 S
T 29 S
T 30 S
T 31 S
T 32 S
CLIFFS
BOOK
GREEN RIVER
RIVER
GREEN
50
70
THOMPSON
CRESCENT JCT.
CISCO
128
191
ARCHES NATIONAL PARK
COLORADO
RIVER
DOLORES
RIVER
CASTLE VALLEY
MOAB
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
UTAH
COLORADO
CANYONLANDS NATIONAL PARK
LA SAL JCT.
46
LA SAL
191
GRAND RESOURCE AREA
Open to Mining Claims
Existing Mineral Withdrawals
Open for Potash Exploration and Production (and for Mining Claims)
Existing Sand and Gravel Sales and Free Use Areas
Open for Humates Sales
N.
0
6
12
18
SCALE IN MILES
Note: Applies only to Public Lands; Private and State Lands not shown.

FIGURE 9

Management of Minerals Other than Oil and Gas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UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
CLIFFS
BOOK
GREEN RIVER
RIVER
THOMPSON
CRESCENT JCT.
CISCO
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128
191
46
ARCHES NATIONAL PARK
COLORADO
DOLORES
RIVER
CASTLE VALLEY
MOAB
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS NATIONAL PARK
LA SAL JCT.
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UTAH
COLORADO
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T 21 S
T 22 S
T 23 S
T 24 S
T 25 S
T 26 S
T 27 S
T 28 S
T 29 S
T 30 S
T 31 S
T 32 S
GRAND RESOURCE AREA
1 Open to Leasing
2 Open with Special Stipulations
3 Open with No Surface Occupancy
4 No Leasing
Note: Applies only to Public Lands; Private and State Lands not shown.
N
0
6
12
18
SCALE IN MILES

FIGURE 10

Application of Oil and Gas Leasing Categories

Allow potash prospecting (with potential of production) on aproximately 142,100 acres, to encourage production of potash. There are approximately 12,500 acres of existing potash leases.

Adopt the oil and gas category system below, which will protect critical wildlife habitat, watersheds, and recreational use. (Stipulations are listed in Appendix F.)

Category 1	Open to leasing with a set of standard stipulations	1,156,560 acres
Category 2	Open to leasing with a choice of special stipulations to fit protection needs	563,808 acres
Category 3	Open to leasing, but with no surface occupancy (directional drilling from outside the area is required)	70,274 acres
Category 4	No leasing	28,912 acres

Continue to allow sales of common varieties of minerals (sand and gravel) on 6,000 acres, which are free of mining claims, to provide materials for road construction, which could be an important factor in development of other resources.

Allow sales of humates on approximately 1,750 acres which are free of mining claims. (This includes a 250-acre former sale area.)

RECREATION

Maintain two developed campgrounds (30 acres), five developed picnic areas (28 acres), and three developed scenic overlooks (1,120 acres) to provide public outdoor recreational opportunities. Figure 11 shows the general locations of recreation management actions.

Construct rest rooms at seven heavily used recreation sites along the Colorado River to reduce sanitation problems.

Continue to issue recreation use permits (four-wheel drive vehicle tours, horseback trips, bear hunting camps, survival school, etc.) to enhance outdoor recreational opportunities and provide business opportunities for private enterprise.

Maintain 5 miles of developed trails to provide outdoor hiking opportunities.

Continue to permit competitive and noncompetitive ORV events.

Maintain 10 miles of developed motorcycle trails to provide opportunities for recreational ORV motorcycle use.

Maintain 27 miles of developed scenic road system to provide access to sightseeing opportunities.

Continue the existing river management program on the Colorado and Dolores rivers (24,000 passenger days per year; 30 commercial outfitters) to provide for the safe and enjoyable long-term use of the river resource.

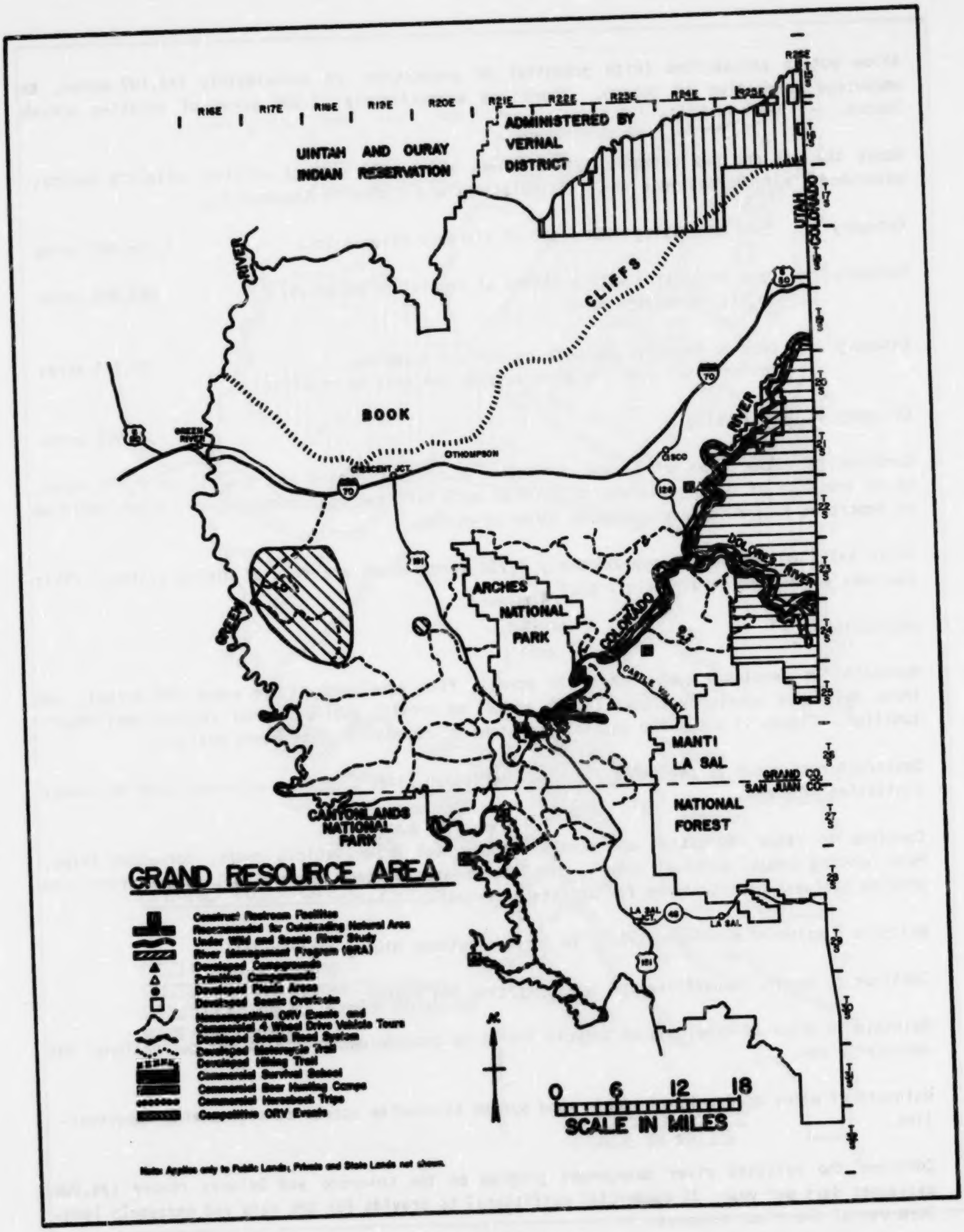

GRAND RESOURCE AREA
Construct Restroom Facilities
Recommended for Outstanding Natural Area
Under Wild and Scenic River Study
River Management Program (SRA)
Developed Campgrounds
Primitive Campgrounds
Developed Picnic Areas
Developed Scenic Overlooks
Noncompetitive ORV Events and Commercial 4 Wheel Drive Vehicle Tours
Developed Scenic Road System
Developed Motorcycle Trail
Developed Hiking Trail
Commercial Survival School
Commercial Bear Hunting Camps
Commercial Horseback Trips
Competitive ORV Events
Note: Applies only to Public Lands; Private and State Lands not shown.
R16E
R17E
R18E
R19E
R20E
R21E
R22E
R23E
R24E
R25E
R26E
T15S
T16S
T17S
T18S
T19S
T20S
T21S
T22S
T23S
T24S
T25S
T26S
T27S
T28S
T29S
T30S
T31S
T32S
UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
UTAH
COLORADO
CLIFFS
BOOK
GREEN RIVER
RIVER
GREEN
THOMPSON
CRESCENT JCT.
CISCO
ARCHES NATIONAL PARK
COLORADO
RIVER
DOLORES RIVER
CASTLE VALLEY
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS NATIONAL PARK
LA SAL JCT.
LA SAL
70
50
6
128
191
46
N
0
6
12
18
SCALE IN MILES

FIGURE 11

Recreation Management

Continue to manage 65 miles of the Colorado and Dolores river study corridors as required under the Wild and Scenic Rivers Act. (These rivers were studied and recommended for designation under this act and will be managed to prevent changes in their character until Congress acts on the recommendation.)

Designate 1,375 acres in Negro Bill Canyon as an ONA to protect scenic recreational values, the sensitive plant Aquilegia micrantha, and the riparian area along the perennial stream.

FIRE MANAGEMENT

Implement a limited suppression policy on the entire GRA (1.8 million acres) which will allow fires to burn under initial monitoring on plant communities to create a diversity of vegetation and increase AUMs for both livestock and wildlife while reducing present fire suppression costs.

Initiate prescribed fire and seeding on approximately 14,149 acres (in 11 allotments), thereby increasing AUMs by approximately 1,770 for livestock and wildlife. (This figure was included in the future AUMs shown in Appendix D.) Figure 12 shows the general locations of the prescribed fire areas.

MANAGEMENT OF WILDERNESS STUDY AREAS

The BLM wilderness review process consists of three distinct phases: inventory, study, and reporting. Eleven WSAs have been identified within the GRA. Figure 13 shows the general locations of the WSAs.

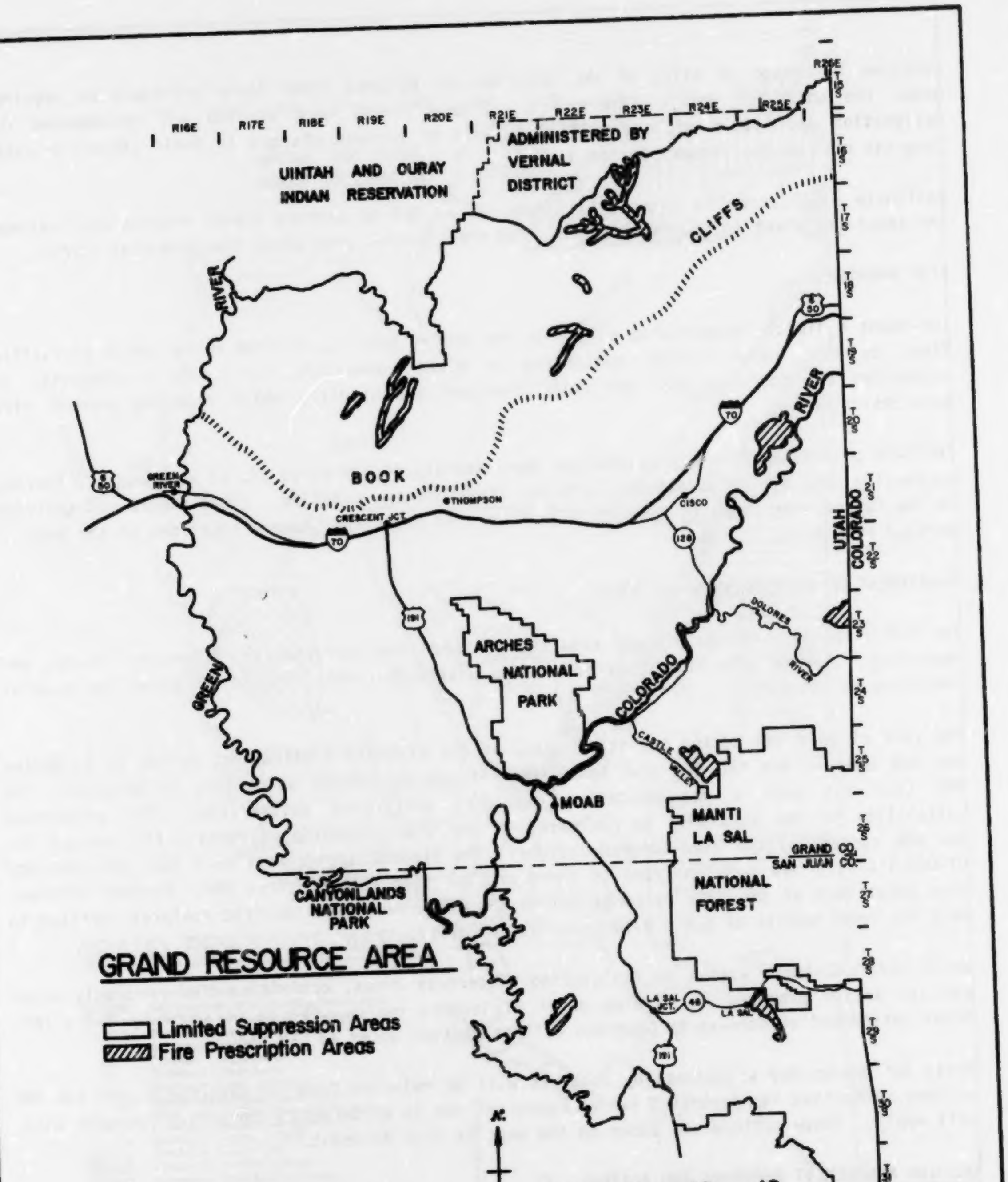
The role of this RMP during the study phase of the Utah BLM's wilderness review is to define how the WSAs within the GRA will be managed if not designated wilderness by Congress. The RMP does not make a recommendation regarding wilderness suitability. The wilderness suitability of the WSAs will be addressed in the Utah statewide wilderness EIS, except for one WSA straddling the Utah-Colorado border. The Black Ridge Canyons West WSA, CO-070-113A/UT-060-116/117, has been analyzed in the Grand Junction Resource Area RMP. Further information about each of the WSAs is contained in the wilderness site-specific analyses, written to meet the requirements of BLM's Wilderness Study Policy.

Until Congress takes action on designating wilderness areas, activities that presently occur and any action proposed in an area under wilderness review will be governed by BLM's IMP. Areas designated wilderness by Congress will be managed under 43 CFR 8560.

Areas not designated wilderness by Congress will be released from IMP management, and the RMP actions summarized in Appendix G (which represent the No Wilderness alternative for each WSA) will apply. These actions are shown on the maps in this document.

ONGOING MANAGEMENT PROGRAMS AND ACTIONS

The Grand RMP focuses on ten significant resource management issues. Other ongoing BLM management programs and actions not discussed in the plan will continue. This section briefly describes these programs and management actions regarding their status relevant to the RMP.


GRAND RESOURCE AREA
Limited Suppression Areas
Fire Prescription Areas
Note: Applies only to Public Lands; Private and State Lands not shown.
R16E
R17E
R18E
R19E
R20E
R21E
R22E
R23E
R24E
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T 15 S
T 16 S
T 17 S
T 18 S
T 19 S
T 20 S
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T 23 S
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T 25 S
T 26 S
T 27 S
T 28 S
T 29 S
T 30 S
T 31 S
T 32 S
UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
CLIFFS
BOOK
GREEN RIVER
RIVER
GREEN
6 50
50
70
THOMPSON
CRESCENT JCT.
CISCO
128
COLORADO
RIVER
UTAH
COLORADO
DOLORES
RIVER
191
ARCHES NATIONAL PARK
COLORADO
CASTLE VALLEY
MOAB
MANTI LA SAL
NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
CANYONLANDS NATIONAL PARK
LA SAL JCT.
46
LA SAL
N
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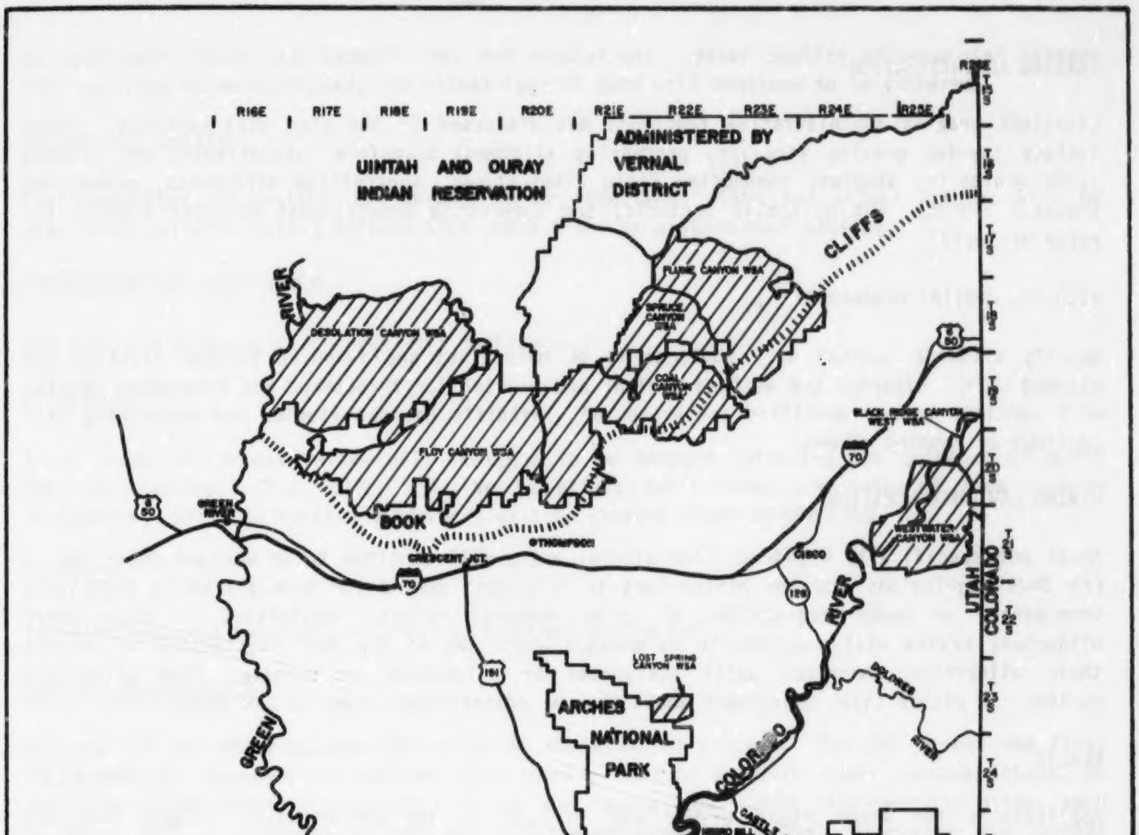
6
12
18
SCALE IN MILES

FIGURE 12

Fire Management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UINTAH AND OURAY INDIAN RESERVATION
ADMINISTERED BY VERNAL DISTRICT
CLIFFS
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RIVER
GREEN
DESOLATION CANYON WSA
FLOY CANYON WSA
FLUME CANYON WSA
SPRUCE CANYON WSA
COAL CANYON WSA
BLACK RIDGE CANYON WEST WSA
WESTWATER CANYON WSA
LOST SPRING CANYON WSA
NEGRO BILL CANYON WSA
MILL CREEK CANYON WSA
BEHIND THE ROCKS WSA
GREEN RIVER
CRESCENT JCT.
THOMPSON
CISCO
MOAB
LA SAL JCT.
LA SAL
CASTLE VALLEY
COLORADO
RIVER
DOLORES RIVER
ARCHES NATIONAL PARK
CANYONLANDS NATIONAL PARK
MANTI LA SAL NATIONAL FOREST
GRAND CO.
SAN JUAN CO.
UTAH
COLORADO
6 50
70
128
191
46
T 15 S
T 16 S
T 17 S
T 18 S
T 19 S
T 20 S
T 21 S
T 22 S
T 23 S
T 24 S
T 25 S
T 26 S
T 27 S
T 28 S
T 29 S
T 30 S
T 31 S
GRAND RESOURCE AREA
▨ Wilderness Study Areas
Note: Applies only to Public Lands; Private and State Lands not shown.
N
0 6 12 18
SCALE IN MILES

FIGURE 13

Wilderness Study Areas

GRAZING ADMINISTRATION

Livestock grazing administrative functions not discussed in the plan will continue. These include issuing grazing licenses, processing allotment transfers, establishing and reading range monitoring studies, conducting field examinations, supervising allotments, processing trespass actions, making public contacts, and completing benefit/cost analysis studies for range projects.

WILDLIFE HABITAT MANAGEMENT

Quality wildlife habitat will continue to be maintained and improved through existing and planned HMPs. Riparian and wetland habitat and habitat for threatened and endangered species will continue to be identified and protected. Wildlife habitat studies and monitoring will continue as funding allows.

MINING LAW ADMINSTRATION

Areas not specifically withdrawn from mineral entry will continue to be managed under the 43 CFR 3809 regulations and the mining laws to help meet demand for minerals while preventing unnecessary or undue degradation of other resource values. Activities in areas under wilderness review will continue to be managed under the 43 CFR 3802 regulations to protect their wilderness character until designated as wilderness or released from wilderness review. In either case, management would then be administered under 43 CFR 3809.

REALTY

Applications for minor rights-of-way and for use of the public lands through land use permits, temporary use permits, leases, and cooperative agreements will continue to be considered individually. Proposals under project BOLD and the State indemnity program will also be considered as they are submitted. Recommendations made and actions approved will be consistent with the objectives of the RMP.

The withdrawal review program will continue to review existing withdrawals from the land laws to ensure that such withdrawals are still needed and consistent with present management.

FOREST MANAGEMENT

Permits for harvest of woodland products will continue to be sold to the public, consistent with the availability of woodland products and the protection of sensitive resource values.

CULTURAL RESOURCE MANAGEMENT

Cultural resource clearances will be completed on all projects requiring BLM approval or initiated by the BLM that include surface disturbance. Areas or sites eligible for nomination to the National Register of Historic Places will be considered for nomination.

WATER MANAGEMENT

The inventory of water resources on the public lands will continue. Water sources located on public land necessary to meet BLM program objectives will be developed and filed on according to applicable State and Federal laws and regulations. Water quality of perennial streams will continue to be monitored, and climatological data will continue to be gathered.

ENDANGERED SPECIES

The protection of habitat for endangered or threatened plant and animal species will be considered prior to taking actions that could alter or disturb such habitat.

TRANSPORTATION MAINTENANCE

The BLM road maintenance program will continue.

WILDERNESS

Areas under wilderness review will continue to be managed following the guidance of BLM's IMP, as amended. This policy will be in effect until areas are released from interim management. Areas designated wilderness will be managed under 43 CFR 8560.

CONTRACTS

Existing approved contracts will not be affected by the RMP.

SUPPORT REQUIREMENTS

Approval of the RMP completes one stage of the planning process. The RMP is not the final implementation document for actions that require further specific plans, process steps, or decisions under specific provisions of law and regulations. More site-specific plans, such as AMPs, will be completed through the resource management programs. Procedures and methods for accomplishing the objectives of the RMP on the ground will be developed through these activity plans.

The following additional project layout, implementation, and monitoring support actions are needed to implement the RMP:

CRITICAL WATERSHEDS

- water inventory;
- survey and design of instream drop structures;
- preliminary engineering design and updated cost estimates and analysis for Stinking Spring, including input from appropriate staff specialists;
- layout and design of salinity control structures;
- inventory of critical erosion areas, designated channels, and potential treatment areas;
- low level aerial photography of subbasins and salinity project areas; and
- evaluation of aerial photos.

LIVESTOCK REQUIREMENTS

- coordination with ranchers on livestock manipulation;
- survey and design for range improvements and land treatments; and
- monitoring studies.

WILDLIFE HABITAT REQUIREMENTS

- monitoring studies.

OFF-ROAD VEHICLE USE AND MANAGEMENT

- additional signing program; and
- compliance monitoring in ORV designation areas.

LANDS ACTIONS

- cadastral survey;
- land appraisal;
- mineral evaluation; and
- mining claim validation.

UTILITY CORRIDORS

- large-scale map showing existing rights-of-way.

RECREATION

- installation of rest rooms.

FIRE MANAGEMENT

- monitoring studies.

The support actions listed above are foreseen at this time. The need for additional support actions, such as engineering and other studies, specific project plans, or compliance reviews, may be identified as a result of further planning. Further planning documents, such as AMPs, HMPs, or wilderness management plans (for congressionally designated wilderness areas), will be prepared as necessary to document site-specific implementation of the RMP. All such actions will be designed to achieve the objectives of the RMP. Additional environmental analyses will be conducted where appropriate to supplement the final EIS.

MONITORING THE PLAN

The final planning step is monitoring and evaluation of the plan. A formal monitoring plan will be developed to evaluate (1) the effectiveness of the implementation of management actions identified in the RMP, and (2) the adequacy of the management actions in achieving the goals and objectives of the RMP. The effectiveness of the RMP/EIS in predicting and analyzing environmental impacts will also be monitored.

Formal monitoring reviews will take place at intervals not to exceed 5 years. These reviews will (1) assess the progress of plan implementation and determine if management actions are resulting in satisfactory progress toward achieving objectives; (2) evaluate the plan to see if it is still consistent with the plans and policies of State or local governnments, other federal agencies, and Indian tribes; and (3) ascertain whether new data are available that would require alteration of the plan.

As part of the formal monitoring review, the government entities mentioned above will be requested to evaluate the plan and advise the District Manager of its consistency with their officially approved resource management related plans and policies. Authorized advisory groups will also be consulted during the review in order to secure their input.

Upon completion of a periodic monitoring review, or in the event that modifying the plan becomes necessary, the Moab District Manager will determine what, if any, changes are necessary to ensure that the management actions of the plan are consistent with its objectives. If the District Manager finds that a plan amendment is necessary, an environmental analysis of the proposed change will be conducted and a recommendation on the amendment will be made to the State Director. If the amendment is approved, it may be implemented 30 days after notice in the Federal Register.

Potential changes in the plan may take the form of maintenance actions, plan amendments, or plan revisions. Maintenance actions respond to minor data changes. Such maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Maintenance actions do not require the formal public involvement and interagency coordination process undertaken for plan amendments or revisions. A plan amendment would be initiated in response to a proposed action that could result in a change in the scope of the resource uses or that would not be in conformance with management actions given in the RMP. A plan revision would be initiated after formal monitoring review because of the need to consider monitoring findings, new data, new or revised policy, a change in circumstances, or a change in the terms, conditions, or decisions of the approved plan.

GENERAL IMPLEMENTATION SCHEDULE

The following schedule shows estimated completion dates for proposed management actions. Implementation of management actions is subject to available funding.

Critical Watersheds

1986 Install instream drop structures
1986 Divert Stinking Spring
1993 Implement salinity control treatments
1993 Manipulate vegetation and initiate land and watershed treatments

Livestock Requirements

1985 Authorize all grazing use at present levels (71,678 AUMs) and implement monitoring studies to determine whether stocking rates should be adjusted
1986 Change season of use on 4 allotments
1986 Change class of livestock on 1 allotment
1986 Manage 3 miles of streams by fencing and rotation of grazing use
1987 Manipulate grazing on 27,000 acres
1992 Implement livestock manipulation techniques on 24 allotments
1992 Implement land treatments on 13 allotments

Wildlife Habitat Requirements

1986 Reserve forage and space for deer and elk winter range in Pear Park, Spring Creek, and Castle Valley

Off-Road Vehicle Use and Management

1986 Designate 1,183,660 acres as open to ORV use
1986 Designate 596,234 acres as limited to existing roads and trails
1986 Designate 24,454 acres closed to ORV use
1986 Designate 15,206 acres as limited to designated roads and trails

Lands Actions

1986 Acquire an access easement at Cisco boat launch
1989 Consider 11,629 acres for disposal
1989 Study 6,594 acres to determine whether they should be retained or disposed of for other purposes

Utility Corridors

1985 Designate 140 miles of de facto corridors as official corridors
1985 Avoid future utility corridor development on 48,245 acres

Minerals

1985 Allow potash leasing on approximately 142,100 acres upon application
1985 Apply the revised oil and gas leasing categories to new leases
1985 Allow sales of humates on 1,750 acres

Recreation

1985 Designate 1,375 acres in Negro Bill Canyon as an ONA
1988 Construct rest rooms at seven locations

Fire Management

1986 Implement a limited fire suppression policy on the entire GRA
1991 Initiate prescribed fire and seeding on approximately 14,149 acres

RANGELAND PROGRAM SUMMARY

PURPOSE AND NEED

This RPS outlines the BLM's range management program in the GRA. It is based on the accompanying RMP.

The program consists of (1) selective management (allotment categorization); (2) livestock forage allocation; (3) proposed allotment management; (4) range improvement projects; and (5) monitoring.

The RPS also explains how initial and subsequent grazing decisions required for program implementation will be made.

RANGE MANAGEMENT OBJECTIVES

Objectives of the range program are to:

- maintain and improve vegetation to sustain existing and future levels of grazing use;
- manipulate livestock grazing to benefit livestock, wildlife, watershed, and vegetation;
- provide stability to livestock operations using public lands; and
- achieve rangeland management through coordination and cooperation with rangeland users.

THE RANGE PROGRAM

SELECTIVE MANAGEMENT

The priority of range improvement completion and annual expenditures by BLM for range supervision and monitoring will be based upon a selective management policy. This approach is a land categorization process which helps Bureau personnel assign management priorities among all allotments. The selective management policy is also designed to concentrate public funds and management efforts on allotments that have the most significant problems and potential for improvement.

Allotments have been grouped into three categories according to their present condition and potential: maintain (M) category; improve (I) category, and custodial (C) category.

Allotments in the M category are in generally good condition and have no serious resource conflicts under present management. They may have some potential for a positive return on investments. I category allotments have serious resource conflicts or unsatisfactory range condition or may be producing below their potential under present management. These allotments have potential to improve or have conflicts that can be resolved through changes in grazing management or investments in range improvement projects. Allotments in the C category have low productivity potential, limited resource conflicts, and no opportunity for a positive return on investments. Present management of these allotments either is satisfactory or is the only logical practice under existing resource conditions.

Three allotments have been changed to the I category since the EIS was written. They are Arth's Pasture, Ida Gulch, and North Sand Flats. One allotment (Bogart) has been changed to the C category. This is consistent with the BLM Final Grazing Management Policy of March 5, 1982, which directs that the initial categorization, as well as the criteria, will be subject to change as new information becomes available during the planning and EIS process.

ALLOCATION

The range management program includes forage allocations to livestock and wildlife to meet resource objectives. Forage allocations for each allotment are shown in Appendix D. Adjustments will be made in accordance with regulations as provided in 43 CFR 4110.3-3.

An attempt will be made to reach agreements with permittees to restrict grazing to the average licensed use level (initial AUMs as shown in Appendix D). Such agreements will recognize preference but hold grazing use at average licensed use levels until monitoring indicates a need for adjustment. Where monitoring shows increases or decreases in forage, the change in allocation will be phased over a 5-year period and closely monitored. Changes in allocation may be made in less than 5 years if acceptable agreements are reached and implemented.

MANAGEMENT ACTIONS BY ALLOTMENT

Appendix D shows specific livestock management actions planned for each allotment.

RANGE IMPROVEMENT PROJECTS

Planned range improvements, costing an estimated $2,781,688 (in 1984 dollars), include 65.5 miles of fencing; 45 reservoirs; 1 water catchment; 6 spring developments; 1 well; 37.25 miles of pipeline; 32,160 acres of chaining; 29,640 acres of plowing; prescribed fires on 14,149 acres; and drill seeding on 5,325 acres. These projects are listed by allotment in Table 3, along with their costs and benefit/cost ratios.

The total cost figure includes both construction and maintenance. Cost figures are given with no indication as to whether the BLM or the permittees will fund the projects. Likewise, the benefit/cost ratios are based on total costs (at an interest rate of 7.875 percent).

MONITORING

A number of different resource studies will be conducted to evaluate the effectiveness of the range management program. These include:

Trend and Utilization

Trend studies will be conducted to determine changes in relation to vegetation objectives. Forage utilization studies will be conducted to determine pattern of grazing and how much vegetation is removed by grazing animals.

Utilization will involve the use of cages and the "key forage plant" method (see Appendix

E). Trend will be monitored by observing changes in plant density (number per unit area) by species and plant composition by age and form class.

Livestock Actual Use

Livestock use data will be obtained from the permittee annually. These records will reflect the number and class of animals grazing in each allotment or pasture and the amount of time they graze.

Climate

Weather data will be evaluated to determine the effects of climate on herbage yields and for correlation with the vegetation studies.

IMPLEMENTATION

AGREEMENTS AND DECISIONS

After release of the RPS, permittees and other interested parties will be consulted for coordination in implementing the proposed actions shown in Appendix D.

The goal of consultation and coordination is to arrive at mutual agreements which specify how the range will be managed. These agreements may affect stocking rates, seasons of use, grazing systems, etc. These agreements will be documented with copies circulated to affected parties and kept on file at the GRA office. These agreements will also be acknowledged and implemented by a grazing decision issued under 43 CFR 4160, which will provide adversely affected parties the opportunity to appeal as provided at 43 CFR 4. Future RPS updates will summarize the status of these agreements.

If agreements are not reached, BLM will issue decisions recognizing present grazing preference and season and specifying the monitoring to be conducted. If and when monitoring data confirm a need to change management, an attempt will be made to make the change through agreement. If a suitable agreement is not reached, a decision will be issued, which starts the 5-year implementation period.

The scheduling of decisions will be as shown in Figure 14.

MONITORING STUDIES

Monitoring studies will be ongoing to determine proper allocation levels, management results, and needed season of use changes.

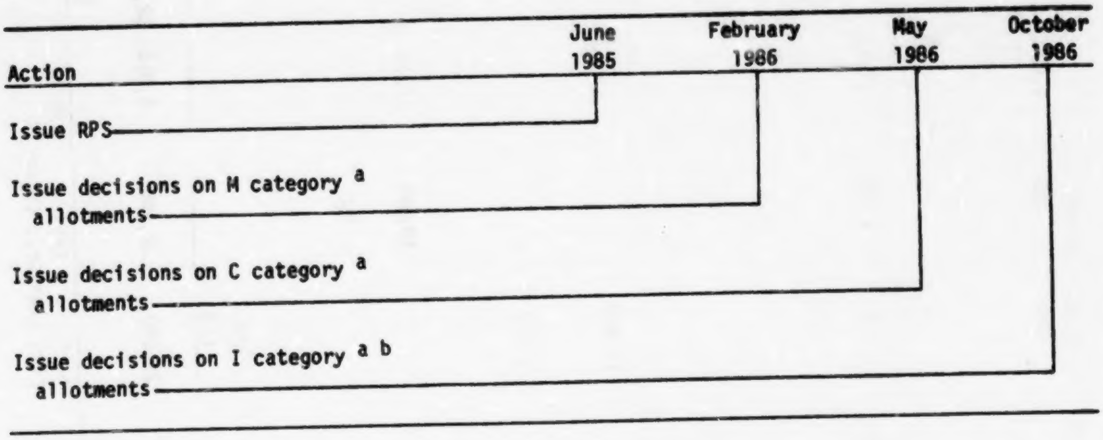
Table 4 shows the number of studies planned for each allotment, as well as priority based on selective management category. Key areas and key plant species have been identified for those allotments with new monitoring studies. Study locations were chosen on the basis of site potential and permittee consultation. Livestock operators will be contacted each time studies are to be read, and contacts will continue to be documented. The operators will submit their actual use records as part of the studies process. This information will be supplemented by field counts during the grazing season.

TABLE 3

Allotment Project Packages, Costs, and Benefit/Cost Ratios

Allot. Number	Allotment Name	Fences (miles)	Reservoirs/ Catchments	Springs/ Wells	Pipelines (miles)	Land Treatment (acres) Burn	Plow	Chain	Drill	Total Costs	B/C Ratio
5821	Adobe Mesa					2,880				$ 70,335	0.6
5853	Agate										
5861	Arth's Pasture		3							24,016	1.1
5809	Athena	4	8							53,336	1.1
5804	Barley Flat-Ronzio										
5808	Bar X						3,200			69,473	0.6
5864	Between the Creeks										
5827	Big Flat-Ten Mile	4			3					38,274	1.4
5872	Big Triangle										
5817	Blue Hill		1	2	6			320		76,433	0.9
5815	Bogart										
5863	Buckhorn		1	1	10	1,200		2,140	1,715	189,222	1.0
5810	Cisco Mesa										
5805	Cisco Springs Wash	22			4					92,630	0.8
5865	Coal Canyon										
5862	Corral Wash						4,480			117,126	0.4
5816	Cottonwood	0.25				692				15,419	2.0
5856	Crescent Canyon		2							17,751	1.0
5826	Crescent Junction										
5842	Diamond	0.25				212			90	6,480	0.9
5386	East Coyote										
5838	Elgin										
5874	Floy Canyon					585				4,178	3.3
5801	Floy Creek										
5851	Granite Creek										
5803	Green River Flats										
5825	Harley Dome										
5389	Hatch Point	7	19	1		2,240	1,280	4,430	1,920	385,692	0.8
5812	Highlands										
5877	Horse Canyon	5	2							28,261	0.9
5852	Horsethief Point				2					17,008	1.7
5850	Hotel Mesa										
5818	Ida Gulch		1							8,988	0.8
5847	Kane Springs	0.25								1,746	0.4
5388	Lisbon					1,600	8,320	14,600		569,905	0.6

5883	Little Hole					2,420				44,314	0.6
5837	Lone Cone										
5387	Lower Lisbon						200	350	1,600	36,700	0.7
5879	Main Canyon					1,000				21,177	0.6
5871	Middle Canyon					1,000				21,177	1.4
5844	Mill Creek										
5811	Monument Wash										
5814	Nash Wash	8			3					44,454	1.4
5819	North River										
5860	North Sand Flats		2	2						26,747	1.0
5822	Pipeline										
5869	Potash	0.5	2							15,874	0.8
5820	Professor Valley	4								14,366	0.3
5802	Rattlesnake (G)										
5385	Rattlesnake (SJ)										
5876	River										
5823	Ruby Ranch										
5845	San Arroyo		2				11,520			262,905	0.8
5849	Scarf Mesa										
5836	Showerbath Springs	0.25				320				5,452	5.1
5813	South Sand Flats		2	1						20,948	0.7
5846	Spring Canyon Bottom										
5843	Steamboat Mesa		1		8					149,946	0.4
5857	Sulphur Canyon										
5882	Taylor	5						10,320		283,109	0.5
5824	Ten Mile Point	5			1					32,029	0.9
5873	Thompson Canyon										
5878	Tusher Wash										
5830	Whipsaw Flats										
5875	Willow Flats										
5384	Windwhistle				0.25					1,180	0.8
5854	Winter Camp						640			15,037	0.5
	TOTALS	65.5	46	7	37.25	14,149	29,640	32,160	5,325	$2,781,688	


Action
June 1985
February 1986
May 1986
October 1986
Issue RPS
Issue decisions on M category [a] allotments
Issue decisions on C category [a] allotments
Issue decisions on I category [a] [b] allotments

[a] If decisions are substantially different from those anticipated in this RPS, issuance will be deferred until after the update.

[b] Decisions requiring more than 17 months to issue will be identified in the RPS update. The update will state the reasons for the extended time period and describe actions needed to issue decisions by a specified date.

FIGURE 14

Schedule for Issuance of Grazing Decisions

TABLE 4

Numbers of New Monitoring Studies and Priority, by Allotment

Priority	Allotment Name	Concerns & Comments	Category	New Monitoring Studies	New Riparian and/or Wildlife Studies	Old Photo Trend Studies
1	Steamboat Mesa	Deer, elk, livestock competition	I	4	yes	8
2	Buckhorn	Deer, elk, livestock, AMP	I	20	yes	14
3	Hatch Point	Antelope area, proposed plan	I	14	yes	5
4	Potash	Bighorn sheep area	I	2	yes	
5	Floy Canyon	AMP, poor condition	I	2		1
6	Granite Creek	Perennial stream, deer use	I	1		
7	Kane Springs	Bighorn sheep, stream	I	2		1
8	Bar X	Main antelope area	I	4	yes	
9	San Arroyo	Main antelope area	I	5	yes	3
10	Windwhistle	Antelope area	I	2		2
11	Little Hole	Bighorn sheep use	I	2		2
12	Horsethief Point	Bighorn sheep use	I	4		
13	Corral Wash	Antelope, critical watershed	I	3		
14	Harley Dome	Antelope, critical watershed	I	7	yes	4
15	Sulphur Canyon	Antelope, critical watershed	I	7		4
16	Pipeline	Antelope, critical watershed	I	2		3
17	Taylor	AMP, watershed	I	16		27
18	Big Flat-Ten Mile	AMP, watershed	I	30	yes	36
19	Cottonwood	Stream, watershed	I	1		
20	Diamond	Stream, watershed	I	2	yes	
21	Cisco Springs Wash	Watershed	I	5		9
22	Agate	Watershed	I	2		1
23	Barley Flat-Ronzio	Watershed	I	6		5
24	Crescent Junction	Watershed	I	1		4
25	Athena	Watershed	I	4		4
26	Cisco Mesa	Watershed	I	6		8
27	Crescent Canyon	Watershed	I	3		1
28	Floy Creek	Watershed	I	3		1
29	Highlands	Watershed	I	1		2
30	Monument Wash	Watershed	I	4		1
31	Thompson Canyon	Watershed	I	2	yes	
32	Whipsaw Flats	Watershed	I	4		3

TABLE 4 (Concluded)

Numbers of New Monitoring Studies and Priority, by Allotment

Priority	Allotment Name	Concerns & Comments	Category	New Monitoring Studies	New Riparian and/or Wildlife Studies	Old Photo Trend Studies
33	Showerbath Springs	Stream	I	4		
34	Lower Lisbon	AMP	I	3		3
35	Nash Wash	Possible Management, deer	I	6	yes	8
36	Lisbon	Possible Management	I	14		20
37	Ten Mile Point	Possible Management	I	3	yes	
38	Professor Valley	Possible Management	I	4		6
39	Horse Canyon	Possible Management	I	3		1
40	Spring Canyon Bottom	Possible Management	I	1		
41	Blue Hill	Possible Management	I	7	yes	6
42	Ida Gulch	Riparian zone	I	0		1
43	South Sand Flats	Season of use	I	2		2
44	Arth's Pasture	Bighorn	I	2		2
45	Willow Flats		I	1		
46	Winter Camp		I	1		
47	Adobe Mesa		I	1		2
48	Main Canyon		I	1		
49	Middle Canyon		I	3		
50	North Sand Flats	Riparian	I	4	yes	2
51	Scarf Mesa		M	[a]3		
52	East Coyote	AMP	M	4		2
53	Hotel Mesa		M	0		2
54	Lone Cone		M	0		
55	Coal Canyon		M	0		
56	Tusher Wash		M	0		
57	Rattlesnake (San Juan)		M	0		
58	Ruby Ranch		C	2		2
59	Rattlesnake (Grand)		C	0		
60	Big Triangle		C	0		
61	Mill Creek	Riparian	C	0	yes	2
62	Between the Creeks	Riparian	C	0	yes	2
63	North River		C	0		
64	Green River Flats		C	0		1
65	Elgin		C	0		1
66	River		C	0		1
67	Bogart		C	0		

[a] In conjunction with Buckhorn AMP.

Climate data will be gathered monthly from 21 precipitation gauges throughout the resource area. Daily temperature and precipitation will be recorded from official stations in Green River, Thompson, Dewey, Moab, Castle Valley, and La Sal, as well as from two remote recording stations near Dead Horse Point and the Colorado state line north of Highway I-70.

RANGE IMPROVEMENT PROJECTS

Achievement of the objectives of the range management program depends largely upon completion of range improvements. A list of the projects proposed for each allotment (and the approximate cost) is shown in Table 3.

The order or ranking of range improvement expenditures will be based on allotment categorization and on benefit/cost determinations, which are shown in Table 3. Projects on allotments in the I category with a good benefit/cost ratio will have highest priority for funding.

Time frames for implementation of all projects will depend on future funding levels.

APPENDIX A

Comparative Summary, Alternative Management Actions and Impacts

The management actions analyzed in the final EIS, along with their anticipated impacts, are presented in tabular format beginning on the other side of this page. It should be noted that the RMP is different in some ways from all of these alternatives. They are presented here only to show what was analyzed in the EIS.

APPENDIX A

Comparative Summary, Alternative Management Actions and Impacts

Alternative A No Action	Alternative B Production
Soils-There would be a short-term increase in erosion from land treatments and energy and mineral development and an increase in soil erosion and loss of site productivity in the long term as a result of ORV use.	Soils-There would be a short-term increase in erosion from land treatments and energy and mineral development and an increase in soil erosion and loss of site productivity in the long term as a result of ORV use.
	Subalternative: With livestock grazing at preference levels, soil erosion rates would also increase, resulting in additional losses in soil productivity.
Water Quality-There would be a short-term increase in sediment and salinity from maintenance of land treatments and energy and mineral development and a long-term decrease in water quality from increases in sediment and salinity from ORV use.	Water Quality-There would be a short-term increase in sediment and salinity from maintenance of land treatments and energy and mineral development and a long-term decrease in water quality from increases in sediment and salinity from ORV use.
	Subalternative. With livestock grazing at preference levels, water quality would decline; sediment and salinity would increase.
Air Quality-No significant impact would occur to air quality.	Air Quality-Some significant short-term impacts on air quality could occur under a limited fire suppression policy or during prescribed fires.
Vegetation-Vegetation would be affected as follows: Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 1,348,527 acres. Vegetation would increase around instream structures. Overall vigor of the vegetation would be maintained or improved on 403,655 acres under existing AMPs.	Vegetation-Vegetation would be affected as follows: Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 986,898 acres These conditions would be maintained or improved by livestock manipulations on 765,284 acres.

Alternative C Limited Protection	Alternative D Protection
Soils-There would be a short-term increase in erosion from land treatments and a minimal short-term increase in erosion from oil and gas activity. Improved water infiltration and minimal soil compaction would result in decreased soil loss and increased productivity due to ORV restrictions in the long term.	Soils-There would be a short-term increase in erosion from land treatments. Restrictions on oil and gas activity, livestock grazing, and ORV use would improve water infiltration, minimize soil compaction, retain onsite soil productivity, and result in an overall increase in productivity.
	Subalternative: With livestock grazing at reduced levels, soil erosion rates would also decrease because of an increase in vegetative cover and a decrease in soil disturbance.
Water Quality-There would be a short-term increase in sediment and salinity from land treatments and energy and mineral development and a long-term net decrease of 19,408 tons of salt and 187,640 tons of sediment annually into the Colorado River through instream drop structures, salinity control projects, changing the season of livestock use, control of ORV use, and the application of the oil and gas categories.	Water Quality-There would be a short-term increase in sediment and salinity from land treatments and energy and mineral development and a long-term net decrease of 28,970 tons of salt and 261,360 tons of sediment annually into the Colorado River through instream drop structures, salinity control projects, changing the season of livestock use, control of ORV use, and the application of the oil and gas categories.
	Subalternative: There would be a long-term net decrease of 39,360 tons of salt and 497,173 tons of sediment annually into the Colorado River.
Air Quality-Some significant short-term impacts on air quality could occur under a limited fire suppression policy or during prescribed fires.	Air Quality-Some significant short-term impacts on air quality could occur under a limited fire suppression policy.
Vegetation-Vegetation would be affected as follows:	Vegetation-Vegetation would be affected as follows:
Present livestock management at the level of past 5 years' licensed use would maintain ecological conditions on 833,545 acres; these conditions would be maintained or improved by livestock manipulations on 488,636 acres.	Present livestock management at level of past 5 years' licensed use would maintain ecological conditions on 827,850 acres; these conditions would be maintained or improved by livestock manipulations on 382,429 acres.

Alternative A No Action	Alternative B Production
	Subalternative: With livestock grazing at preference levels, ecological condition would decline on 986,898 acres.
Maintenance of land treatments would change vegetative composition on 52,000 acres. Decreases in vegetation would occur on 350 to 500 acres per year because of oil and gas activities; on 250 acres in the humate sale area; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; on areas transferred in land disposal; and in areas where ORV use is continued. Maintenance of existing watershed improvements would prevent improvement of vegetation in those areas.	Vegetation would increase around instream structures and on 14,149 acres treated with prescribed fire and seeding. Species composition would be changed on 52,000 acres where existing land treatments are maintained, and on 70,700 acres where new ones are implemented. Decreases in vegetation would occur on 400 to 550 acres per year because of oil and gas activities; on the 1,750 acres where humates would be removed; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; and in areas where ORV use is continued. Maintenance of watershed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease in pinyon-juniper and sagebrush communities because of limited fire suppression and prescribed fire.
	Vegetation on up to 22,471 acres could be lost to BLM management through land disposal actions.

Alternative C Limited Protection	Alternative D Protection
Ecological conditions would be improved through restriction of grazing on 27,000 acres of saline soils and on 3 miles of perennial streams, and would be maintained on 32,000 acres where mineral withdrawals would be implemented. Perennial forage plants would be protected through season of livestock use changes on 358,775 acres and by the restrictions on ORV use. Change in class of livestock on 69,042 acres would increase vigor of browse species, while decreasing vigor of grass. Vegetation would increase around instream structures, salinity control structures, watershed treatment areas, and on 14,149 acres treated by prescribed fire. Species composition would be changed on 52,000 acres where existing land treatments are maintained and on 68,100 acres where new ones are implemented	Ecological conditions would be improved through restriction of grazing on 50,000 acres of saline soils, 2 miles of perennial streams, and through elimination of grazing on 34,189 acres, and would be maintained on 47,000 acres under mineral withdrawals. Perennial forage plants would be protected through season of livestock use changes on 478,478 acres. Vigor of browse would be increased and vigor of grass decreased on 154,215 acres through change in class of livestock. Species composition would be changed on 52,000 acres where existing land treatments are maintained on 68,100 acres where new ones are implemented. Subalternative: Ecological condition would be maintained on 722,281 acres; these conditions would be maintained or improved on 282,436 acres. Ecological conditions would be improved on 536,534 acres of saline soils and through elimination of grazing on 125,462 acres, and would be maintained on 47,000 acres under mineral withdrawals. Perennial forage plants would be protected through season of livestock use changes on 197,829 acres.
Decreases in vegetation would occur on 300 to 400 acres per year because of oil and gas activities; on the 250 acres in the humate sale; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under recreation use permits; and in areas where ORV use is continued. Maintenance of watershed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease in pinyon-juniper and sagebrush communities	Vegetation would increase around instream structures, salinity control structures, and watershed treatment areas. There would be a 5 percent increase in ground cover in areas of ORV closures. Decreases in vegetation would occur on 250 to 400 acres per year because of oil and gas activites; on 250 acres in the humate sale; on 30 acres per year because of mining claim development; on an undetermined number of acres due to activities under re-

Alternative A No Action	Alternative B Production
Livestock Grazing-There would be no gain in AUMs. Loss of AUMs could occur through land disposal.	Livestock Grazing-There would be a net gain of 6,860 AUMs, due to land treatments, prescribed fire, and land disposal.
Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 27 allotments, and big game species would continue to compete with livestock for forage and space on 23 allotments. It would also cause a continued decrease in ecological condition for riparian and aquatic habitat on four allotments. Habitat productivity for deer, elk and bighorn sheep would decrease under two AMPs. One riparian area would continue to decrease in ecological condition under one AMP. Impacts of any land disposal action would be analyzed during consideration of the disposal request. Under present oil and gas categories, 99 percent of the deer and elk winter range	Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 14 allotments, and big game species would continue to compete with livestock for forage and space on 10 allotments. It would also cause a continued decrease in ecological condition for riparian and aquatic habitat on four allotments. Livestock manipulation techniques would improve habitat and reduce spatial competition on 22 allotments. Land treatments (including prescribed fire) would add 2,617 AUMs for deer, elk, and antelope. Potash development could result in the loss of 50 percent (13,507 acres) of desert bighorn sheep habitat. The disposal of two 80-acre tracts along the Colorado River could cause

Alternative C Limited Protection	Alternative D Protection
because of limited fire supression and prescribed fire. Vegetation on up to 11,629 acres could be lost to BLM management through land disposal actions.	creation use permits; and in areas where ORV use is continued. Maintenance of water shed improvements would prevent improvement of vegetation in those areas. There would be a long-term decrease in pinyon-juniper and sagebrush communities because of limited fire suppression. Vegetation on up to 6,642 acres could be lost to BLM management through land disposal actions.
Livestock Grazing-There would be a net gain of 5,060 AUMs, due to land treatments, construction of an evaporation pond, grazing restrictions, prescribed fire, and land disposal. A total of 1,497 sheep AUMs would be converted to cattle AUMs.	Livestock Grazing-There would be a net gain of 1,638 AUMs due to land treatments, construction of an evaporation pond, grazing restrictions, and land disposal. A total of 4,374 sheep AUMs would be converted to cattle AUMs.
	Subalternative: There would be a net loss of 16,571 AUMs for livestock due to restrictions and elimination of livestock grazing, construction of an evaporation pond, land treatments, and land disposals. A total of 4,374 sheep AUMs would be converted to cattle AUMs.
Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 9 allotments, and big game species would continue to compete with livestock for forage and space on 8 allotments. It would also cause a continued decrease of riparian and aquatic habitat on one allotment. Livestock manipulation techniques would improve 3 miles of perennial stream and improve habitat on 15 allotments. Land treatments (including prescribed fire) would provide an additional 4,886 AUMs. Season of livestock use changes would reduce competition with livestock for bighorn elk and antelope on 13 allotments and improve riparian habitat on one allotment. Change in class of livestock would reduce competition with	Wildlife-Wildlife habitat would be affected as follows: Continuing present livestock management would cause a loss of wildlife habitat productivity on 6 allotments, and big game species would continue to compete with livestock for forage and space on 6 allotments. Livestock manipulation techniques would improve 2 miles of perennial streams and improve the habitat on 2 allotments. Land treatments, elimination of livestock grazing (4 allotments), and restriction of livestock grazing (700 acres) would result in a net gain of 5,681 AUMs for wildlife ungulates, and protection of both aquatic and riparian habitats on one allotment. Season of use changes would reduce competition for bighorn, antelope and elk on 16 allotments and improve both aquatic and riparian habitats on one allotment. Change

Alternative A No Action	Alternative B Production
in Herd Unit 28-B is open to year-round exploration and development activities. Approximately 56 percent of the desert bighorn sheep habitat within the Mineral Bottom area, 100 percent of the Rattlesnake area, and 68 percent of the Potash area is open to year-round oil and gas exploration and development activities.	loss of habitat for game and nongame species (including bald eagle). Placing the entire GRA under Oil and Gas Leasing Category 1 would allow year-round oil and gas activities that could affect 200,769 acres of deer and elk winter range, including calving and fawning areas. It could cause the loss of 25,168 acres of antelope habitat. Oil and gas activities could cause impacts on approximately 44,816 acres of bighorn sheep habitat.
	Subalternative: Until the grazing carrying capacities are determined, it is not known what additional impacts would result from grazing at full preference levels. Impacts would be at least as great as under Alternative B.

Alternative C
Limited Protection

livestock for elk and deer on winter and spring forage areas in one allotment. Restricting livestock grazing from portions of 10 allotments (27,000 acres) would improve forage for nongame wildlife species and allow big game populations to remain stable. Limiting ORVs to existing roads and trails would reduce disturbance to wildlife. The exclusion and/or avoidance of establishing rights-of-way within 130,164 acres in resource conflict areas would Protect 48,245 acres of bighorn sheep habitat. Oil and gas category stipulations would provide protection for 260,769 acres of deer and elk winter range; 25,431 acres of antelope; 16 873 acres of bighorn habitat; and 3,840 of golden eagle nest sites. Potash developmentd cause loss of 13,567 acres (50 percent) of bighorn sheep habitat.

Alternative D
Protection

in class of livestock on 2 allotments would reduce deer, elk and antelope competition for winter/spring forage. Rotational grazing on 2 miles of perennial stream (2 allotments) would restore and improve riparian habitat. Reservation of all forage on 3 areas (22,044 acres) would assure winter/spring forage for deer and elk. Limiting ORV use to existing roads and trails would reduce disturbance to wildlife. Exclusion and avoidance of 533,496 acres of bighorn sheep habitat and deer and elk winter range in establishing rights-of-way would protect those areas. Oil and gas category stipulations would provide protection for 200,769 acres of deer and elk habitat, 16,873 acres of bighorn sheep habitat, 25,431 acres of antelope habitat, and 3,840 acres of Golden eagle nest sites.

Subalternative: Continuing present livestock management would cause a loss of wildlife habitat productivity on five allotments, and big game species would continue to compete with livestock for forage and space on five allotments. Livestock management would improve 2 miles of perennial streams and improve habitat on two allotments.

Land treatments and elimination of livestock grazing on 16 allotments would result in a net gain of 10,928 AUMs for wildlife ungulates and protection of both aquatic and riparian habitats in seven allotments. Season of use changes would reduce competition for bighorn, antelope, and elk on six allotments and improve both aquatic and riparian habitats on one allotment. Change in class of livestock on two allotments would reduce deer, elk, and antelope competition for winter/spring forage. Reservation of all forage on three areas (22,044 acres) would assure winter/spring forage for deer and elk.

Alternative A No Action	Alternative B Production
Mineral Resources-As a result of activities under the oil and gas category system now being applied, 150 oil and gas wells are being drilled annually, with annual production of approximately 10 million MCF (thousand cubic feet) of natural gas and 50,000 barrels of oil	Mineral Resources-As a result of activities under the oil and gas category system application for this alternative; approximately 155 oil and gas wells would be drilled annually, with annual production of aproximately 10 million MCF of natural gas and 50,000 barrels of oil.
Salable minerals management has resulted in the annual removal of as much as 2.5 million tons of gravel per year. Also, humate production is estimated to become 50,000 tons annually after the project begins.	Salable minerals management would result in the annual removal of as much as 2.5 million tons of gravel per year. Humate production is estimated to become as much as 150,000 tons a year depending on the production and market conditions after the project begins.
As a result of locatable minerals management, gold production could run as high as 600 ounces per year, and uranium production could run as high as 1 million pounds of yellowcake.	As a result of locatable minerals management, the same amount of gold and yellowcake would be produced as in Alternative A.
Mineral Rights-Under the existing management action the entire GRA is open to mining claims, with the exception of 1,850 acres withdrawn from mineral entry for protection of widely scattered campgrounds and scenic sites. About 200,000 mining claims exist in the GRA; of these about 500 are for placer gold and the balance are for uranium.	Mineral Rights-The entire GRA would be open to mining claims with the exception of 1,850 acres withdrawn from mineral entry for widely scattered campgrounds and scenic sites. About 20,000 mining claims would continue to exist in the GRA (500 placer gold, the balance uranium). Lands on which mining claims are abandoned could be restaked at any location in the GRA.
Transportation-An additional 10 to 15 miles of roads would be built annually from development of mining claims. Oil and gas exploration and development would add 75 to 100 miles of road per year. There would be a slight increase in roads developed through increasing ORV use.	Transportation-Development of locatable minerals would result in at least 10 to 15 miles of new roads per year. Oil and gas exploration and development would lead to more than the current number of miles of road (75 to 100 miles). There would be a slght increase in roads developed through increasing ORV use.

Alternative C
Limited Protection

Mineral Resources-As the result of activities under the oil and gas category system application for this alternative, approximately 145 oil and gas wells would be drilled annually, with annual production of approximately 9.5 to 9.9 million MCF of natural gas and 49,500 barrels of oil resulting.

Salable minerals management would result in the removal of the same amount of sand, gravel and humate material as that for Alternative A.

As a result of locatable minerals management, the same amount of gold and yellowcake would be produced as in Alternatives A and B.

Mineral Rights-The entire GRA would be open to mining claims with the following exceptions: 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites; 32,000 acres under new withdrawal orders for protection of scenic lands along the Colorado River. Existing claims that are located within the 32,000-acre withdrawal area would still be recognized, but once abandoned, could not be restaked.

Transportation-The impact on transportation from development of mining claims would be insignificant. Roads and trails would degenerate over 635,894 acres where ORV use would be limited or eliminated. New road construction from oil and gas exploration would fall below the current 75 to 100 miles per year.

Alternative D
Protection

Mineral Resources-As the result of oil and activities under the oil and gas category system application for this alternative, approximately 140 oil and gas wells would be drilled annually with annual production of approximately 9.4 to 9.8 million MCF of natural gas and 47,500 barrles of oil resulting.

Salable minerals management would result in the removal of the same amount of sand, gravel and humate material as that for Alternatives A and C.

As a result of locatable minerals management, the same amount of gold and yellow cake would be produced as in Alternatives A, B, and C.

Mineral Rights-The entire GRA would be open to mining claims with the following exceptions: 1,850 acres under existing withdrawal orders for protection of campgrounds and scenic sites; 47,000 acres under new withdrawal orders for protection of scenic lands along the Colorado and Dolores rivers. Existing mining claims that are located within the 47,000-acre withdrawal area would still be recognized, but once abandoned, could not be restaked. There is no means of estimating any rate of abandonment under this alternative. A few uranium claims and virutally all of the 500 placer gold mining claims in the GRA would fall in the withdrawal area.

Transportation-Reducing the amount of acreage open to mining claims may bring a slight decrease from the 75 to 100 miles of new roads now being developed each year. Roads and trails would degenerate over the 635,894 acres and within the ten floodplains and ten major washes where ORV use would be limited or eliminated. New road

Alternative A No Action	Alternative B Production
Cultural Resources-No significant impacts would occur to cultural resources.	Cultural Resources-No significant impacts would occur to cultural resources.
Visual Resources-Oil, gas, and potash activities could temporarily change visual characteristics; however, affected areas would return to the original visual quality over the long term.	Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.
Special Designation Areas-ORVs would cause some loss of scenic values on 635,894 acres and 250 miles of floodplains.	Special Designation Areas-ORVs would cause some loss of scenic values on 635,894 acres and 250 miles of floodplains.
Recreation-A long-term increase in recreational ORV use on the 70,000 acres now in use would occur.	Recreation-A long-term increase in recreational ORV use on 70,000 acres now in use would occur.
Oil and gas activities permitted under the prevailing oil and gas category system application would cause the loss of some resource values on seven of the 22 areas identified as containing exceptional scenic recreational opportunities.	Oil and gas activities permitted under the oil and gas category system for this alternative would cause the loss of resource values on 22 areas identified as containing exceptional scenic recreational opportunities.
Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic River study corridors would ensure that their essential recreatinal values are not diminished.	Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic River study corridors would ensure that their essential recreational values are not diminished.
	The access easement to the Colorado River would help protect essential recreational opportunities.
	Construction of rest rooms at heavily used sites along the Colorado River would im-

Alternative C Limited Protection	Alternative D Protection
	construction from oil and gas exploration would fall below the current 75 to 100 miles per year.
Cultural Resources-No significant impacts would occur to cultural resources.	Cultural Resources-No significant impacts would occur to cultural resources.
Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.	Visual Resources-Chaining, oil and gas, and potash activities would have short-term effects on visual characteristics; however, affected areas would return to the original visual quality in the long term.
Special Designation Areas-The designation of 635,894 acres as under restrictions for ORV use and the oil and gas category stipulations would help provide protection for 22 areas identified as possessing exceptional scenic qualities, and 65 miles of Wild and Scenic River study corridors.	Special Designation Areas-The designation of 635,894 acres and 250 miles of stream channel as under restrictions for ORV use and the oil and gas category stipulations would help provide protection for 22 areas identified as possessing exceptional scenic qualities, 65 miles of wild and Scenic River study corridors and water quality.
Recreation-Restrictions on ORV use would decrease recreational ORV opportunities.	Recreation-Restrictions on ORV use would decrease recreational ORV opportunities.
The oil and gas category stipulations for this alternative would protect resource values in the 22 areas identified as containing exceptional scenic recreational opportunities.	The oil and gas category system stipulations for this alternative would protect resource values in 22 areas identified as containing exceptional scenic recreational opportunities.
Maintenance of existing recreational improvements would protect recreational values and dollar investments. Protection of Wild and Scenic River study corridors would ensure that their essential recreational values are not diminished.	Maintenance of existing recreational improvements would protect recreationsl values and dollar investments. Protection of Wild and Scenic River study corridors would ensure that their essential recreational values are not diminished.
The access easement to the Colorado River would help protect essential recreational opportunities.	The access easement to the Colorado River would help protect essential recreational opportunities.
Construction of rest rooms at heavily used sites along the Colorado River would improve river recreational opportunities.	Construction of rest rooms at heavily used sites along the Colorado River would improve river recreational opportunities.

Alternative A No Action	Alternative B Production
	prove river recreational opportunities. Prescribed fire would improve recreational hunting opportunities.
Economic Conditions-The reductions from active preference could decrease ranch values by as much as 6 percent. The prices commercial outfitters could charge for their services could be affected in some recreation areas, and commercial use of one area could be discontinued.	**Economic Conditions**-Twenty-nine of 45 livestock operators would have more available forage. If this forage was grazed, their returns above cash cost would increase by $162,832 (+8 percent) which should increase their ranch values. However, reduction from active preference could reduce ranch values by as much as 4 percent. Increased production from ranchers residing in the GRA would increase regional income by $168,320 (+0.3 percent) and eight jobs (+0.2 percent). Land sales near Moab, Spanish Valley and Castle Valley could have a depressing effect on nearby private land market prices; however, all land sales would increase county revenues. Increased oil and gas drilling and production would eventually result in five to ten added local jobs (+0.1 to 0.2 percent) and $85,000 to $170,000 local income. Local units of government would receive increased property tax revenues and indirectly receive increased revenue from increased royalty payments to the State. There may be an unquantifiable reduced increase in tourist visitation and expenditures. The price outfitters charge for their services could be affected in some areas, and existing commercial use in other areas could be discontinued.
	Subalternative: Grazing at active preference would result in an unquantifiable increase in sedimentation, salt pickup, and

Alternative C Limited Protection	Alternative D Protection
Prescribed fire would improve recreational hunting opportunities.	Acquiring scenic easements on 9,990 acres of private land along 80 miles of the Colorado and Dolores rivers would protect scenic recreational qualities there.
Economic Conditions-Watershed actions that could have quantifiable effects on water yield and salt loading would decrease the annual cost borne by water users in the Lower Colorado River Basin by $535,000 to $170,000 and result in a $55,000 loss of value from decreased water yield. Two of the 45 livestock operators would have less available forage; 24 of the 45 would have more available forage; and 12 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would increase by $33,573 (+1 percent) which should also increase ranch values. However, the reductions from active preference could reduce ranch values by as much as 5 percent. Greater wildlife populations would increase hunter pressure, which could increase local income by as much as $185,000 and local employment by as many as seven jobs. Land sales near Castle Valley, Moab, and Spanish Valley would have a depressing effect on nearby private land market prices. Decreased oil and gas drilling and production would eventually result in two to five fewer local jobs (-0.1 percent) and less local government revenues from reduced property taxes and indirectly from reduced royalty payments to the State. Future gold production and associated employment and income would also be impacted. Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreation areas would be preserved, and the potential for commercial use of other areas would increase.	Economic Conditions-Watershed actions that could have quantifiable effects on water yield, salt loading, and sedimentation would decrease the annual cost borne by water users in the Lower Colorado River Basin by $920,000 to $1,220,000 and result in a $130,000 loss of value from decreased water yield. Ten of the 45 livestock operators would have less available forage; 18 of the 45 would have more available forage; and 38 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would decrease by $61,000 (-3 percent), which should also decrease ranch values. Reductions from active preference could reduce ranch values by as much as 6 percent. Greater wildlife populations would increase hunter pressure, which could increase local income by as much as $190,000 and local employment by as many as seven jobs. Land sales near Castle Valley would have a depressing effect on nearby private land market prices. Decreased oil, gas, and uranium activities would eventually result in 65 fewer local jobs (-1.5 percent) less local government revenue from reduced property taxes and indirectly from reduced royalty payments to the State. Future gold production and associated employment and income would also be impacted. Primitive nonmotorized recreation use and related local expenditures could be higher than would otherwise be the case. Existing commercial use of recreational areas and the potential for commercial use of other areas would increase.
	Subalternative: Watershed actions that could have quantifiable effects on water yield, salt loading and sedimentation would

Alternative A No Action	Alternative B Production
	water yield. This would in turn decrease economic values generated by Lake Powell, increase cost borne by water users in the Lower Colorado River Basin, and increase water yield values. If operators were to graze at active preference, or as close to active preference as they could, the cumulative increase in returns above cash cost would be 17 percent for cattle operators and 11 percent for sheep operators. Because in many cases forage production is expected to be less than active preference, grazing at active preference could result in short-term economic gains with long-term economic losses. Livestock grazing at active preference could negatively affect big game populations and reduce hunter success rates. Lower success rates would discourage hunters from hunting in the GRA. Decreased hunter pressure would reduce the $130,000 of personal income and five jobs now attributable to hunting in the GRA.
Social Conditions-There would be little or no change from the existing environment. Under this alternative, changes in attitudes toward BLM would be affected only by outside factors and the way management actions are implemented.	Social Conditions-Local groups and communities would not be affected to such a degree as to noticeably affect their existing social environment. In general local attitudes toward BLM would improve because restrictions would be reduced and greater local resource use and development would be allowed. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative.
	Subalternative: None of the management actions would impact local communities so far as to noticeably affect their existing social environment. Subalternative B would place the fewest restrictions on activities taking place on public land. This subalternative would be perceived by most residents as having the greatest beneficial impact on the local economy.

Alternative C Limited Protection	Alternative D Protection
	decrease the annual cost borne by water users in the Lower Colorado River Basin by $580,000 to $760,000 and result in a $127,000 loss of value from decreased water yield. Fifteen of the 45 livestock operators would have less available forage; 8 of the 45 would have more available forage; and 7 of the 45 would receive major exclusions during the spring. Aggregate returns above cash costs would decrease by $324,216 (-14 percent), which should also decrease ranch values. Reductions from active preference could reduce ranch values by as much as 8 percent. Greater wildlife populations would increase local income by as much as $190,000 and local employment by as many as seven jobs. The probability that hunter pressure and expenditures would increase to these levels is greater than under Alternative D.
Social Conditions-None of the management actions would impact the local groups or communities to such a degree as to affect their existing social environment. However, this alternative would probably be perceived by most residents as having a significant negative impact upon the local community.	Social Conditions-The social-well being of nine of the 45 livestock operators would be significantly affected. Local attitudes toward BLM would worsen because restrictions would be increased, less local resource use and development would be allowed, and this alternative would be perceived to have a significant negative impact on the local economy. These attitudes would vary, however, by those individuals and groups who would gain and those who would lose under this alternative.
	Subalternative: The social well-being of 12 of the 45 livestock operators would be significantly affected. Subalternative D would place the most restrictions on local use and development of public lands. Therefore, this subalternative would be perceived as having the greatest negative impact on the local economy.

APPENDIX B

Mitigating Measures

CRITICAL WATERSHEDS

Mitigating measures are used in the GRA to help prevent offsite sedimentation and salinity from oil and gas impacts. Specific recommended measures require timely rehabilitation and revegetation of a site, as well as preliminary input into the location and design of the drill pad and roads to ensure watershed protection.

All areas disturbed for access to critical areas will be properly reclaimed as specified by the Area Manager.

Native material (i.e., logs, stones, etc.) will be used as much as possible to minimize cost and visual intrusions.

Reseeding will also be required for all disturbed areas. The seed mixture will be determined by the Area Manager.

LIVESTOCK REQUIREMENTS

MITIGATING MEASURES FOR LAND TREATMENTS (CHAINING OR PLOWING FOLLOWED BY SEEDING)

The patterns of the vegetation modification will be designed to blend into the landscape to maintain the natural appearance of the area. Irregular patterns will be implemented to increase the ecotone.

Areas within 200 feet of well-traveled roads will not be chained.

Steep drainages (over 30 percent slope) will not be chained.

The need for and proper dimensions of buffer zones will be jointly agreed to by BLM and the UDWR prior to on-the-ground development of projects. Buffer zones will be provided, where necessary, to prevent disturbance to riparian ecosystems.

Vegetation will be left in place. Permits will be given for salvage of trees for firewood and posts.

Seed from a mixture of plant species adapted to the specific site will be used for seeding. This will be a variety of browse, forbs, and grass species that are desirable for both livestock and wildlife.

Treatment areas will not be grazed by livestock until vegetation becomes established. Two growing seasons of rest will be required in most cases.

MITIGATING MEASURES FOR DRILL SEEDING

Seed from a mixture of plant species adapted to the specific site will be used for seeding. This will be a variety of browse, forbs, and grass species that are desirable for both livestock and wildlife.

Treatment areas will not be grazed by livestock until vegetation becomes established. Two growing seasons of rest will be required in most cases.

MITIGATING MEASURES FOR MAINTENANCE OF PRIOR TREATMENT BY SPRAYING (2,4-D)

Prescribed spraying plans will be developed in accordance wih BLM Manual 9220. Herbicide 2,4-D mixed with water at the rate of 1 pound of acid equivalent per acre will be appled by airplane. Contamination of water will be avoided, and proximity to agricultural lands will be identified.

Projects will not exceed State and Environmental Protection Agency (EPA) pollution standards. Application of chemicals will conform to EPA regulations and BLM requirements.

The patterns of the vegetation modification will be designed to blend into the landscape to maintain the natural appearance of the area.

Chemical spray will be applied only when winds are less than 5 miles per hour, to control drift.

The need for and proper dimensions of buffer zones will be jointly agreed upon (by BLM and UDWR) prior to on-the-ground development of projects.

Sprayed vegetation will be left in place.

WILDLIFE

Water developments will be designed to include small animal escape ramps. Water troughs will not be higher than 24 inches above the ground. Overflow discharge will be a minimum of 50 feet from the trough and fenced to exclude livestock from the discharge area.

OFF-ROAD VEHICLE USE AND MANAGEMENT

Suitable access routes will be signed in each designated area.

LANDS ACTIONS

Site-specific mitigating measures will be designated for each right-of-way based upon the field examination, environmental analysis, and land report.

When any public lands are transferred out of federal ownership, access to surrounding public lands will be retained. Site-specific mitigating measures will be designated for each area based upon field exam, environmental analysis, and land report.

MINERALS

Stipulations have been developed for oil and gas activities under the oil and gas leasing category system (Appendix F contains all of the stipulations). This system uses four categories designed to provide a framework for specifying surface protection measures. The categories are:

Category 1. Areas open to leasing with standard stipulations added to the leases.

Category 2. Areas open to leasing, but with special stipulations added to the leases. These special stipulations are designed to protect environmental qualities of particular locations.

Category 3. Areas open to leasing but closed to surface occupancy for protection of sensitive environmental qualities. Directional drilling is permitted from sites in adjacent Category 1 and 2 areas.

Category 4. Areas closed to leasing for protection of extremely sensitive environmental qualities.

Protective stipulations are applied to oil and gas activities taking place in areas under wilderness review (see Appendix F.)

Stipulations have been written to apply the regulations contained in 43 CFR 3802 to individual mining claim development projects in areas that are under wilderness review.

Special stipulations have been written to apply the regulations contained in 43 CFR 3809 to individual mining claim development projects that disturb 5 or more acres on BLM administered lands.

Special stipulations are applied for individual mineral lease development projects where mineral materials other than oil and gas are being removed.

Special conditions are written individually for projects involving removal of common mineral materials such as sand, gravel, and building stone under free use permits or sale contracts.

RECREATION

Rest rooms will be designed to blend in with the natural surroundings.

Soil disturbance from construction of rest rooms will be confined to the immediate vicinity of the construction site.

Disturbed areas will be reseeded to native vegetation.

FIRE MANAGEMENT

Prescribed fires will be implemented according to a written fire supression plan.

Weather factors will be monitored for proper conditions prior to implementation of a prescribed fire.

Prescribed fires will not exceed pollution standards of the State of Utah and/or the EPA.

Prescribed fires will be scheduled to occur when the most desirable plants are dormant.

Any prescribed fires will leave at least 1 percent of the existing targeted species, in the form of islands of vegetation, for use by wildlife and for aesthetics.

Prescribed fires in antelope habitat areas will be implemented in patches or spots, leaving at least 20 percent of the existing vegetative cover (primarily sagebrush) for use by antelope, while providing an opportunity for forbs to proliferate on the burned areas.

Prescribed fires will be implemented only when the ground moisture is optimum for burning without permanently damaging desirable plants.

APPENDIX C

Planning Criteria

The planning criteria used to derive resolution of the planning issues in the RMP are as follows. Any plan changes, amendments, or revisions will be based upon these planning criteria unless new or additional criteria are specifically developed.

CRITICAL WATERSHEDS

Critical watersheds on public lands are primary sources of sedimentation and salinity in the Colorado River. These lands are also more susceptible to surface disturbing activities than are other watersheds. For these reasons, the protection of watershed values on these lands must be a primary consideration of the management planning and decision process.

Objectives that must guide the management planning and decision process on critical watershed areas are:

- surface disturbance must be kept to a minimum;
- development on floodplains must be avoided wherever there is a practical alternative;
- the beneficial functions of degraded floodplains must be restored; and
- the cost and effectiveness of various management actions in reducing the degradation must be considered.

LIVESTOCK REQUIREMENTS

The practices selected for management of vegetation resources must result in the best balance of resource (livestock, mineral, ORV) use and forage production while satisfying the physiological needs of the different plant species. Major consideraton shall be given to:

- condition and capability of the vegetation to sustain existing and future levels of grazing use;
- need to manipulate livestock grazing to benefit livestock, wildlife, and vegetation;
- need to improve livestock distribution;
- need to improve soil, watershed, and vegetation conditions;
- demand for additional forage and habitat by grazing ungulates;
- need for new land treatments for wildlife and livestock;
- present and future demand for livestock and the economic importance of ranching operations, and
- the livestock industry's dependence on public lands.

WILDLIFE HABITAT REQUIREMENTS

Practices selected for management of water, spatial requirements, and vegetation resources must result in the optimum balance of resource protection and habitat requirements for wildlife populations. Factors to be considered are:

- condition and capability of the available vegetation to sustain a productive wildlife habitat;
- availability of water and space for wildlife use; and
- present and future demand for wildlife and the economic importance of wildlife oriented recreation to the community.

OFF-ROAD VEHICLE USE AND MANAGEMENT

Classifications for ORV use on BLM administered lands will be made in accordance with Executive Order 11644, 43 CFR 8340, and other applicable regulations.

Conflicts caused by ORV uses and the areas of occurrence will be identified, and the best method of resolution will be determined. Consideration will be given to:

- conflicts among ORV uses;
- conflicts between ORV uses and other resource values; and
- whether designating the geographical area where the conflict occurs as limited or closed for ORV use would resolve the conflict.

Unless designated as limited or closed to ORV use, areas will be designated open for this use. ORV use in areas designated as closed, or in the closed portions of areas designated as limited, will be allowed only under permit or official authorization.

Current and potential high level recreational ORV use areas (e.g., trails, race tracks, dune areas, etc.) shall be identified via historical use, visitor preferences, and feasibility studies.

LANDS ACTIONS

The designation of lands for community expansion, economic development, and other public and private use via sales, exchanges, recreation and public purpose leases, or other forms of disposal shall consider:

- local community expansion and economic development objectives;
- whether the physical capabilities of the public lands in the GRA are adequate to support actions needed to meet the stated objectives of the community;
- the consequences of BLM actions needed to assist the community in meeting its objectives (e.g., socioeconomic impacts, impacts on resources, etc.); and

- the potential of other public and private lands for assisting the community in meeting its objectives.

In determining which public lands should be retained by BLM and which lands require further study to determine their suitability for retention or transfer, the following factors will be considered:

- whether the lands are being actively managed by BLM and are of importance to current or future resource management programs; and

- the location of the public lands in relationship to local communities.

Efforts to guarantee access to river use ares and to protect the scenic qualities along the Colorado and Dolores rivers from any developments that might take place on private lands shall consider:

- meeting the resource objectives outlined in the Recreation issue; and

- whether other public lands can meet the goals that would be met through easement acquisition or other actions.

UTILITY CORRIDORS

Selection of lands for formal designation as utility and transportation corridors will be based on:

- present and potential demand for various kinds of rights-of-way;

- compatibility of various kinds of rights-of-way;

- environmental impacts on natural resources, including soil, air, water, fish, wildlife, and vegetation and on cultural and visual resources;

- economic efficiency of placing a right-of-way within a corridor, considering cost of construction, operation, and maintenance, as well as cost of modifying or relocating existing facilities into a proposed corridor.

- social and economic impacts of such facilities on public land users, adjacent land owners, and other individuals or groups, including health and safety hazards imposed by the designation and use of utility corridors; and

- possibility of designing corridors that would reduce proliferation of rights-of-way.

Selection of those lands that will be considered unsuitable for utility corridors will be based on:

- legal exclusion areas such as WSAs, where new facility development that would degrade existing wilderness values is prohibited; and

- areas where facility development would conflict with critical resource values or current management programs, such as critical wildlife areas, scenic areas, or WSAs.

MINERALS

Exploration and development of leasable and salable mineral commodities will be permitted, subject to surface protection measures that will safeguard other resource values and users. Major considerations include:

- occurrence, quality and quantity of salable and leasable minerals;
- present and potential public demands for minerals;
- potential adverse effects to other resource values on public land and adjacent private, State and local government lands;
- application of oil and gas leasing categories; and
- ability of the land to be rehabilitated.

Since the 1872 Mining Law governs many aspects of mineral development, management of locatable minerals will be limited to (1) planning for withdrawals of tracts to prevent the location of new mining claims, and (2) validity examinations on individual claims to see if legal requirements have been met. Validity examinations are generally done only upon application for patent, to meet BLM policy requirements (such as to determine claim status after wilderness designation), or (rarely) upon request.

RECREATION

Recreational programs will be provided, commensurate with the present and potential demands of various user groups. Major consideration will be given to:

- public safety;
- impact on other recreational opportunities and land uses; and
- impact on the local economy and social structure.

Special use designations will be suggested either to protect seriously conflicting resource uses or to highlight exceptional opportunities for recreation.

FIRE MANAGEMENT

Fire management shall be used to improve and maintain vegetation types, based on:

- capability of the land for improvement through fire manipulation;
- protection of certain public and private lands (e.g., critical wildlife and watershed areas, cultural resources, privately owned structures such as homes, oil and gas pumping stations, etc.);
- need to change designated pinyon-juniper and sagebrush plant communities to a subclimax vegetation, primarily for the benefit of livestock and wildlife forage, as well as to improve watershed conditions; and

- economic impacts of any fire management alternatives.

MANAGEMENT OF WILDERNESS STUDY AREAS

Management of WSAs will be under the IMP.

Management of areas designated as wilderness by Congress will be under 43 CFR 8560. A wilderness management plan will be developed for each designated wilderness.

Management of WSAs if released from wilderness review by Congress will be as outlined in Appendix G.

APPENDIX D

Management Category, Livestock Management Actions, and Initial and Future Animal Unit Months, by Allotment

Allotment Number	Allotment Name	Category	Initial AUMs	Management Actions	Future AUMs
5821	Adobe Mesa[d]	I	Cattle 152 Deer 19 Elk 53	Present management	Cattle 332 Deer 109 Elk 143
5853	Agate[e]	I	Sheep 351 Deer 19	Livestock manipulation techniques	Sheep 348 Deer 19
5861	Arth's Pasture[a]	I	Cattle 524 Deer 19 Bighorn 32	Present management	Cattle 524 Deer 19 Bighorn 32
5809	Athena[e]	I	Cattle 452 Deer 31	Manipulate grazing on 1,000 acres of saline soils Present management on remainder of allotment	Cattle 436 Deer 31
5804	Barley Flat-Ronzio	I	Sheep 873 Deer 67 Elk 13	Livestock manipulation techniques Manipulate grazing on 3,000 acres of saline soils	Sheep 837 Deer 67 Elk 13
5808	Bar-X	I	Sheep 407 Deer 18 Elk 5 Antelope 50	Present management Land treatment (plow 3,200 acres)	Sheep 607 Deer 18 Elk 5 Antelope 250
5864	Between the Creeks	C	Cattle 88 Deer 21	Present management	Cattle 88 Deer 21
5827	Big Flat-Ten Mile[a,e]	I	Sheep 2,930 Cattle 5,500 Deer 166 Bighorn 43	Present management	Sheep 2,918 Cattle 5,487 Deer 166 Bighorn 43

Allotment Number	Allotment Name	Category	Initial AUMs	Mangement Actions	Future AUMs
5872	Big Triangle	C	Cattle 127 Deer 194	Present management	Cattle 127 Deer 194
5817	Blue Hill[e]	I	Cattle 1,842 Deer 314 Elk 132	Present management Land treatment (320 acres chaining) Maintain land treatment (2,883 acres chaining)	Cattle 1,891 Deer 355 Elk 173
5815	Bogart[e]	C	Cattle 208 Deer 397 Elk 310	Present management	Cattle 208 Deer 397 Elk 310
5863	Buckhorn[b,c,d]	I	Sheep 1,497 Cattle 2,743 Deer 1,904 Elk 263	Change class of livestock: sheep to cattle; otherwise present management Land treatments (2,140 acres chaining; 1,715 acres drill seeding) Maintain land treatment (2,470 acres chaining)	Sheep 0 Cattle 4,557 Deer 2,144 Elk 503
5810	Cisco Mesa[e]	I	Sheep 2,267 Deer 500 Antelope 13	Livestock manipulation techniques Manipulate grazing on 3,000 acres of saline soils	Sheep 2,177 Deer 500 Antelope 13
5805	Cisco Springs Wash[e]	I	Sheep 826 Cattle 943 Deer 79 Antelope 13	Livestock manipulation techniques Manipulate grazing on 5,000 acres of saline soils	Sheep 609 Cattle 1,013 Deer 79 Antelope 13

Allotment Number	Allotment Name	Category	Initial AUMs		Management Actions	Future AUMs	
5865	Coal Canyon	M	Cattle Deer	159 6	Present management	Cattle Deer	159 6
5862	Corral Wash	I	Sheep Deer Elk Antelope	1,406 132 3 18	Livestock manipulation techniques Land treatment (plow 4,480 acres)	Sheep Deer Elk Antelope	1,966 132 3 18
5816	Cottonwood[b,d]	I	Cattle Deer Elk	450 154 132	Manage perennial stream	Cattle Deer Elk	494 176 154
5856	Crescent Canyon	I	Sheep Deer Elk	811 34 13	Manipulate grazing on 1,000 acres of saline soils Present management on remainder of allotment	Sheep Deer Elk	777 34 13
5826	Crescent Junction	I	Sheep Deer	173 10	Livestock manipulation techniques	Sheep Deer	173 10
5842	Diamond[d]	I	Cattle Deer Elk	390 102 79	Land treatment (90 acres drill seeding) Change season of use: 6-1 to 11-10 Manage perennial stream	Cattle Deer Elk	409 113 87
5386	East Coyote	M	Cattle Deer	884 29	Present management Maintain land treatments (3,023 acres chaining; 3,279 acres plowing)	Cattle Deer	884 29
5838	Elgin[e]	C	Cattle Deer	48 17	Present management	Cattle Deer	24 17

Allotment Number	Allotment Name	Category	Initial AUMs		Management Actions	Future AUMs	
5874	Floy Canyon[d]	I	Cattle	255	Change season of use: 6-1 to 11-5	Cattle	292
			Deer	78		Deer	94
			Elk	116		Elk	135
5801	Floy Creek[c]	I	Sheep	1,208	Livestock manipulation techniques	Sheep	1,208
			Deer	40		Deer	40
5851	Granite Creek	I	Cattle	39	Present management	Cattle	30
			Deer	71		Deer	71
			Elk	13		Elk	13
5803	Green River Flats[e]	C	Sheep	9	Present management	Sheep	7
			Cattle	32		Cattle	24
			Deer	20		Deer	20
5825	Harley Dome	I	Sheep	861	Livestock manipulation techniques	Sheep	861
			Deer	53		Deer	53
			Antelope	56		Antelope	56
			Bighorn	4		Bighorn	4
5389	Hatch Point[d,e]	I	Sheep	2,877	Livestock manipulation techniques Land treatments (4,430 acres chaining; 1,280 acres plowing; 1,920 acres drill seeding) Maintain land treatments (2,903 acres chaining; 2,961 acres plowing; 1,205 acres spraying)	Sheep	3,179
			Cattle	7,490		Cattle	7,792
			Deer	350		Deer	350
			Elk	92		Elk	92
			Antelope	73		Antelope	683
			Bighorn	21		Bighorn	21
5812	Highlands[b,e]	I	Sheep	600	Livestock manipulation techniques Manipulate grazing on 2,100 acres of saline soils	Sheep	1,004
			Deer	17		Deer	52
5877	Horse Canyon	I	Cattle	410	Livestock manipulation techniques	Cattle	410
			Deer	77		Deer	77

Allotment Number	Allotment Name	Category	Initial AUMs	Management Actions	Future AUMs
5852	Horsethief Point	I	Cattle 162 Deer 10 Bighorn 64	Livestock manipulation techniques	Cattle 162 Deer 10 Bighorn 64
5850	Hotel Mesa	M	Cattle 129 Deer 6	Present management	Cattle 129 Deer 6
5818	Ida Gulch	I	Cattle 84 Deer 19	Present management	Cattle 84 Deer 19
5847	Kane Springs	I	Cattle 287 Deer 17 Bighorn 54	Present management	Cattle 287 Deer 17 Bighorn 64
5388	Lisbon[d]	I	Cattle 7,758 Deer 656 Elk 132 Antelope 6	Livestock manipulation techniques Land treatments (14,600 acres chaining; 8,320 acres plowing) Maintain land treatments (7,568 acres chaining; 12,126 acres plowing)	Cattle 9,291 Deer 2,811 Elk 132 Antelope 6
5883	Little Hole[d]	I	Sheep 642 Deer 12 Bighorn 21	Present management	Sheep 945 Deer 12 Bighorn 21
5837	Lone Cone	M	Cattle 120 Deer 16	Present management	Cattle 120 Deer 16
5387	Lower Lisbon	I	Cattle 787 Deer 27	Present management Land treatments (350 acres chaining; 200 acres plowing; 1,600 acres drill seeding) Maintain land treatments (1,111 acres chaining; 2,788 acres plowing)	Cattle 922 Deer 162

Allotment Number	Allotment Name	Category	Initial AUMs	Management Actions	Future AUMs
5879	Main Canyon[d]	I	Cattle 210 Deer 72 Elk 26	Present management	Cattle 273 Deer 103 Elk 57
5871	Middle Canyon[d]	I	Cattle 264 Deer 262 Elk 132	Present management	Cattle 327 Deer 293 Elk 163
5844	Mill Creek	C	Cattle 48 Deer 28 Elk 13	Present management	Cattle 48 Deer 28 Elk 13
5811	Monument Wash[b]	I	Sheep 958 Sheep 1,397 Deer 27	Livestock manipulation techniques Manipulate grazing on 3,500 acres of saline soils	Sheep 954 Sheep 1,392 Deer 67
5814	Nash Wash	I	Cattle 1,978 Deer 413	Livestock manipulation techniques	Cattle 1,978 Deer 413
5819	North River	C	Cattle 166 Deer 10	Present management	Cattle 166 Deer 10
5860	North Sand Flats	I	Cattle 240 Deer 53 Elk 5	Present management	Cattle 240 Deer 53 Elk 5
5822	Pipeline	I	Sheep 797 Deer 21 Antelope 19	Livestock manipulation techniques	Sheep 797 Deer 29 Antelope 19
5869	Potash[e]	I	Cattle 212 Deer 21 Bighorn 161	Change season of use: 12-1 to 4-30	Cattle 212 Deer 21 Bighorn 161
5820	Professor Valley[e]	I	Cattle 424 Deer 126 Elk 39	Livestock manipulation techniques Maintain land treatment (1,247 acres chaining)	Cattle 422 Deer 126 Elk 39

Allotment Number	Allotment Name	Category	Initial AUMs		Management Actions	Future AUMs	
5802	Rattlesnake[e] (Grand County)	C	Sheep	344	Present management	Sheep	344
			Cattle	90		Cattle	90
			Deer	72		Deer	72
			Elk	239		Elk	239
			Bighorn	32		Bighorn	32
5385	Rattlesnake (San Juan Co.)	M	Cattle	210	Present management	Cattle	210
			Deer	9	Maintain land treatment (1,753 acres plowing)	Deer	9
5876	River	C	Cattle	11	Present management	Cattle	11
			Deer	2		Deer	2
5823	Ruby Ranch	C	Cattle	561	Present management	Cattle	561
			Deer	21		Deer	21
5845	San Arroyo	I	Sheep	2,180	Livestock manipulation techniques	Sheep	2,900
			Deer	101		Deer	101
			Elk	11		Elk	11
			Antelope	63	Land treatment (11,520 acres plowing)	Antelope	783
5849	Scarf Mesa	M	Cattle	48	Present management	Cattle	48
			Deer	65		Deer	65
			Elk	39		Elk	39
5836	Showerbath Springs[d]	I	Cattle	480	Manage perennial stream	Cattle	500
			Deer	230		Deer	240
			Elk	206		Elk	216
5813	South Sand Flats[a,c,e]	I	Cattle	383	Change season of use: 11-1 to 4-15	Cattle	378
			Deer	76		Deer	76
			Elk	11		Elk	11
5846	Spring Canyon Bottom[b]	I	Cattle	100	Livestock manipulation techniques	Cattle	100
			Deer	36		Deer	36
			Bighorn	64		Bighorn	64

Allotment Number	Allotment Name	Category	Initial AUMs	Management Actions	Future AUMs
5843	Steamboat Mesa	I	Cattle 453 Deer 192 Elk 79	Livestock manipulation techniques Maintain land treatment (1,647 acres chaining)	Cattle 453 Deer 192 Elk 79
5857	Sulphur Canyon	I	Sheep 897 Deer 47 Antelope 25	Livestock manipulation techniques	Sheep 897 Deer 47 Antelope 25
5882	Taylor	I	Cattle 3,744 Deer 296 Elk 5	Manipulate grazing on 2,500 acres of saline soils Present management on remainder of allotment Land treatment (10,320 acres chaining Maintain land treatments (2,914 acres chaining; 466 acres plowing)	Cattle 4,082 Deer 676 Elk 7
5824	Ten Mile Point	I	Cattle 1,663 Deer 35 Bighorn 47	Livestock manipulation techniques	Cattle 1,663 Deer 35 Bighorn 47
5873	Thompson Canyon	I	Cattle 379 Deer 41 Elk 39	Manipulate grazing on 500 acres of saline soils Present management on remainder of allotment	Cattle 364 Deer 41 Elk 39
5878	Tusher Wash	M	Cattle 257 Deer 23	Present management	Cattle 257 Deer 23
5830	Whipsaw Flat	I	Sheep 2,932 Deer 27	Livestock manipulation techniques Manipulate grazing on 5,500 acres of saline soils	Sheep 2,789 Deer 27

Allotment Number	Allotment Name	Category	Initial AUMs	Management Actions	Future AUMs
5875	Willow Flats[e]	I	Cattle 153 Deer 17	Livestock manipulation techniques	Cattle 143 Deer 17
5384	Windwhistle	I	Cattle 608 Deer 158 Antelope 25	Present management Maintain land treatment (1,825 acres plowing)	Cattle 608 Deer 158 Antelope 25
5854	Winter Camp	I	Sheep 248 Deer 10	Present management Land treatment (640 acres plowing)	Sheep 288 Deer 50

NOTE: Future AUMs are the expected cumulative result of implementing all management actions in the plan.

[a] Average licensed use shown is the average use that the current permittee has taken.

[b] Since licensed use has been complete nonuse, allowable use would initially be 50 percent of active preference.

[c] New operators' initial AUMs would be the same as active preference.

[d] Increase in AUMs includes prescribed fire.

[e] All or part of decrease is due to land disposal and/or construction of evaporation pond.

APPENDIX E

Utah Guidance for Range Studies

BASIC CONSIDERATIONS

PRIORITIES

Allotments will receive studies in the following priority:

(1) problem allotments or those in the I category;

(2) allotments under AMPs or grazing systems;

(3) allotments where management is planned;

(4) all remaining allotments.

Studies will be conducted as follows:

(1) A complete set of stdies (excluding climate) will be established on allotments.

(2) Climate studies will be established in representative areas or areas where there are data voids to supplement existing weather station data.

(3) Studies will be conducted to provide data necessary to verify or adjust stocking rates for livestock and/or wildlife ungulate populations, adjust seasons of use for livestock, and evaluate progress in achieving management objectives for vegetation resources.

STUDIES

Basic studies will include actual use, utilization, trend, and climate. Phenology and green weight/dry weight conversion studies will be done as necessary to adjust inventory data, or to support studies such as climate/phenology correlation. These studies will be considered the standard. Additional studies (water quality, browse utilization, soil erosion, etc.) may be necessary on crucial, key areas. The key area-species concept will be used in all range studies.

STUDY METHODS

Study methods listed below are those recommended for Utah. Specific circumstances may warrant use of other study methods outlined in Bureau Manual 4412.2 or other modified study procedures. Alternative study procedures must be approved by the State Director prior to implementation.

ACTUAL USE STUDIES

Actual grazing use surveys from operators will be taken annually at the end of the grazing season or billing year. Livestock (and wildlife) counts can be taken at any time deemed appropriate by the range manager.

The following information will be required from the livestock operator: (1) allotment name, pastures grazed; (2) livestock numbers grazed; and (3) season of use (dates); and (4) movement dates to and from specific use areas.

Animal counts will be documented on Bureau Form 4113-1 for livestock and on Form 6602-1 for big game.

UTILIZATION STUDIES

Data will be collected at the end of each grazing period as soon as possible after each class of animal leaves an allotment or pasture. Where both livestock and wildlife ungulates use the area simultaneously, it may be necessary to compare use on adjacent nonuse pastures or on differential exclosures.

Methodology will normally be the key forage plant method. Techniques for estimating utilization are found in Bureau Manual 4412.22(b)7.

Photographs of key species can be taken showing the different levels of use in both grasses and shrubs to supplement transect information. Mapping should show utilization patterns according to the standard 20 percent class intervals. Mapping will be done in the field on topographic maps, orthophotoquads, or other suitable maps or photos, and kept in the allotment file.

TREND STUDIES

Trend data will quantify vegetation changes in terms of plant density (number of plants per unit area) by species and plant community composition by age and form class.

Trend study areas will be correctly located on a topographic map or orthophotoquads and made a part of the study area's permanent file.

Three permanently located plots will be used. Under no circumstances will plants be clipped within these study plots. Plot size will normally be a 9-square-foot frame nested within an 8.3-foot-radius plot (1/200 acre). Plant density and characterization data will be recorded on Bureau Form 4412.27(V-2).

CLIMATE STUDIES

Climate data are needed to make a reasonable analysis of climate influences on plant growth as related tonormal or average years and to differentiate between management-caused vegetation changes and natural occurrences.

Sites will be selected on the basis of the climatic classification scheme used by the Soil Conservation Service (i.e., desert, semidesert, upland, mountain, and high mountain).

Data needs include daily precipitation and daily maximum and minimum air and soil temperatures. Additional data needed to improve accuracy of calculations, especially in early phases, include (1) the date of last permanent snow cover; (2) soil moisture at beginning of growth for selected key species at representative locations, then at mid and late growing season; and (3) wind speed and duration.

Data can be gathered from a number of sources (e.g., livestock operators; BLM rain gauges; remote automatic sensing devices; other local and federal agencies; and permanent weather stations) to provide adequate coverage with limited resources.

EVALUATION

Evaluation of studies data will be in accordance with Bureau Manual 4413.

APPENDIX F

Oil and Gas Category Stipulations

CATEGORY 1

Standard stipulations apply to oil and gas activities in designated Category 1 areas. These appear on all oil and gas leases issued and also apply as standard stipulations to leases in Category 2 and 3 areas. These standard stipulations are incorporated into Bureau Form 3100-11 (March 1984), Offer to Lease and Lease for Oil and Gas. Provisions are further described in Oil and Gas Onshore Order No. 1, found at 43 CFR 3160, effective November 21, 1983.

CATEGORY 2

The following is a list of stipulations that may be applied in whole or in part to individual leases for the protection of specific resources in specific locations.

1. In order to minimize watershed damage, exploration, drilling, and other development activity will be allowed only during the period from April 30 to November 1. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.

2. The lessee is informed that the floodplain portions of the lease area require special attention to prevent damage to surface resources and contamination to the Colorado River system. Any surface use within such areas will be strictly controlled or restricted where not essential for operations. Appropriate modifications to imposed restrictions will be made for maintenance and operations of producing oil and gas wells.

3. Construction of access roads and drill pads on slopes in excess of 30 percent will require special design standards to minimize watershed damage. Drilling operations and any associated construction activities on slopes in excess of 50 percent may require directional drilling to prevent damage to the watershed. Exceptions to these limitations may be specifically authorized in writing by the District Manager of the BLM, with concurrence of the authorized officer of the Federal surface management agency.

4. In order to protect elk winter range, exploration, drilling, and other development activity will be allowed only from May 16 to October 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the District Manager of the BLM, with the concurrence of the authorized officer of the Federal surface management agency.

5. In order to protect deer winter range, exploration, drilling, and other development activity will be allowed only from May 16 to October 31. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer of the Federal surface management agency.

6. In order to protect antelope fawning, exploration, drilling, and other development activity will be allowed only from June 16 to May 14. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer of the Federal surface management agency.

7. No occupancy or other surface disturbance will be allowed within 330 feet of the channel centerline of (Bitter Creek, Westwater Creek, Cottonwood Wash, Cisco Wash, Nash Wash, Sagers Wash, Thompson Wash, Grand Wash, Floy Wash, Salt Wash, Spring Canyon, Hell Roaring Canyon, Mineral Canyon, Bull Canyon, Dry Fork, Sevenmile Canyon, Springs Canyon, Pole Canyon, West Coyote Creek, East Coyote Creek, Castle Creek, Professor Creek, Onion Creek, Granite Creek, Ryan Creek, or Coates Creek). This distance may be modified when specifically approved in writing by the District Manager of the BLM with the concurrence of the authorized officer of the Federal surface management agency.

8. No occupancy or other surface disturbance will be allowed within one-quarter mile of the channel centerline of the Colorado River. This distance may be modified when specifically approved in writing by the authorized officer of the Federal surface management agency.

9. The lessee is informed that the lease is within a sensitive, high use recreation area, and will require special attention to prevent undue damage to the scenic and recreational values. Measures such as natural or artificial screening, painting of all production facilities to blend with the landscape, special rehabilitation requirements, or other similar practices will be required as necessary by the Federal surface management agency.

CATEGORY 3

The following stipulation applies to all leases in Category 3 areas:

> No occupancy or other activity on the surface of (legal subdivision) is allowed under this lease.

CATEGORY 4

No leases are issued in Category 4 areas.

STIPULATIONS FOR OIL AND GAS ACTIVITIES IN WSAs

Existing oil and gas categories and attendant stipulations were developed in 1975, prior to designation of WSAs in 1980 and 1981. Wilderness values were generally not used as the basis for these categories.

Similarly, WSAs were not considered in developing new category proposals in the RMP. In compliance with the Kerr decision (Rocky Mountain Oil and Gas Association v. Cecil D. Andrus and Leo Krulitz, Wyoming, 1980), wilderness values were not evaluated in determining category recommendations. Category recommendations developed for these areas would protect resource values other than wilderness, if these areas are not designated wilderness.

So long as these areas are under wilderness review authorized by the FLPMA, wilderness values present are protected by BLM's IMP, subject to certain valid rights existing at the time FLPMA was passed.

Under IMP, a wilderness stipulation is attached to each oil and gas lease issued in IMP areas after FLPMA. This stipulation (printed below) sets forth certain criteria that must be followed to ensure nonimpairment of wilderness values present. It does not apply to leases issued prior to FLPMA. If any WSA were to be designated as wilderness by Congress, it would be managed under BLM's Wilderness Management Policy of September 1981, and new leasing would not be allowed. Leases in effect at the time of wilderness designation would be valid and could be developed, subject to lease stipulations, but would not be renewed.

The following is reprinted from IMP, Appendix A.

Wilderness Protection Stipulation

By accepting this lease the lessee acknowledges that the lands contained in this lease are being inventoried or evaluated for their wilderness potential by the Bureau of Land Management (BLM) under section 603 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743 (43 USC Sec. 1782), and that exploration or production activities which are not in conformity with section 603 may never be permitted. Expenditures in leases on which exploration, drilling, or production are not allowed will create no additional rights in the lease, and such leases will expire in accordance with law.

Activities will be permitted under the lease so long as BLM determines they will not impair wilderness suitability. This will be the case either until the BLM Wilderness inventory process has resulted in a final wilderness inventory decision that an area lacks wilderness characteristics, or in the case of a wilderness study area, until Congress has decided not to designate the lands included within this lease as wilderness. Activities will be considered nonimpairing if the BLM determines that they meet each of the following three criteria:

(a) It is temporary. This means that the use or activity may continue until the time when it must be terminated in order to meet the reclamation requirement of paragraphs (b) and (c) below. A temporary use that creates no new surface disturbance may continue unless Congress designates the area as wilderness, so long as it can easily and immediately be terminated at that time, if necessary to management of the area as wilderness.

(b) Any temporary impacts caused by the activity must, as a minimum, be capable of being reclaimed to a condition of being substantially unnoticeable in the wilderness study area (or inventory unit) as a whole by the time the Secretary of the Interior is scheduled to send his recommendations on that area to the President, and the operator will be required to reclaim the impacts to that standard by that date. If the wilderness study is postponed, the reclamation will be scheduled for completion within 4 years after approval of the activity. (Obviously, if and when the Interim Management Policy ceases to apply to an inventory unit dropped from wilderness review following a final wilderness inventory decision of the BLM State Director, the reclamation deadline previously specified will cease to apply). The Secretary's schedule for transmitting his recommendations to the President will not be changed as a result of any unexpected inability to complete the reclamation by the specified date, and such inability will not constrain the Secretary's recommendation with respect to the area's suitability or nonsuitability for preservation as wilderness.

The reclamation will, to the extent practicable, be done while the activity is in progress. Reclamation will include the complete recontouring of all cuts and fills to blend with the natural topography, the replacement of topsoil, and the restoration of plant cover at least to the point where natural succession is occurring. Plant cover will be restored by means of reseeding or replanting, using species previously occurring in the area. If necessary, irrigation will be required. The reclamation schedule will be based on conditions, so as to ensure that the reclamation will be complete, and the impacts will be substantially unnoticeable in the area as a whole, by the time the Secretary is scheduled to send his recommendations to the President. ("Substantially unnoticeable" is defined in Appendix F of the IMP.)

(c) When the activity is terminated, and after any needed reclamation is complete, the area's wilderness values must not have been degraded so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability or nonsuitability for preservation as wilderness. The wilderness values to be considered are those mentioned in section 2(c) of the Wilderness Act, including naturalness, outstanding opportunities for solitude or for primitive and unconfined recreation, and ecological, geological or other features of scientific, educational, scenic, or historical value.

If all or any part of the area included within the leasehold estate is formally designated by Congress as wilderness, exploration and development operations taking place or to take place on that part of the lease will remain subject to the requirements of the stipulation, except as modified by the Act of Congress designating the land as wilderness. If Congress does not specify in such act how existing leases like this one will be managed, then the provision of the Wilderness Act of 1964 will apply, as implemented by rules and regulations promulgated by the Department of the Interior.

APPENDIX G

Summary, Management of Wilderness Study Areas

The following is a brief description of the management actions and other activities that would take place in each WSA in the resource area under the RMP, should Congress remove the WAS from wilderness review and therefore from IMP management.

UT-060-068A, DESOLATION CANYON

The 83,070-acre portion of the Desolation Canyon WSA within the GRA is located northeast of Green River, Utah along the eastern shore of the Green River. Present management of livestock would continue, except along one perennial stream where livestock use would be more intensively managed to protect riparian vegetation. The areawide monitoring program would be used to determine future stocking rates within this area. ORV use would be limited to existing roads and trails within 1.5 miles of the eastern bank of the Green River. The remainder of the area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and development. New oil and gas leasing would not be allowed within a 2-mile strip along the eastern bank of the Green River to protect scenic values. (The disposition of oil and gas leasing along the western bank was considered in the Price River Resource Area Management Framework Plan.) The remainder of the area would be open to oil and gas leasing with special stipulations. All of this area would be managed under a limited fire suppression policy.

UT-060-068B, FLOY CANYON

The 72,605-acre Floy Canyon WSA is located in the Book Cliffs north of Crescent Junction, Utah. Instream drop structures would be installed in Floy and Thompson canyons to improve water quality. Present livestock management would continue, except on the Horse Canyon Allotment, where livestock manipulation techniques would be implemented; on the Floy Canyon Allotment, which would have a change in season of use; and on a portion of the Thompson Canyon Allotment, where livestock grazing would be manipulated to protect saline soils. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and mineral development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, and soils highly subject to erosion, except for a small portion along the southern boundary northwest of Crescent Junction which would be open to leasing with standard stipulations. A prescribed fire and seeding program would be implemented in several locations in the center of the area. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100B, FLUME CANYON

The 50,800-acre Flume Canyon WSA is located in the Book Cliffs north of Cisco, Utah. It is the closest of the Book Cliffs WSAs to the Colorado border. Instream drop structures would be installed in Diamond Canyon and Westwater Creek to improve water quality. Present management of livestock would continue, except in Pear Park, where all forage would be reserved for wildlife; in the Diamond Allotment, which would have a change in season of use and a land treatment; and in the Sulfur Canyon and Cisco Mesa allotments, where livestock manipulation techniques would be implemented. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and elk winter range, except for its southern tip which would be open to leasing with standard stipulations. Commercial bear hunting camps would be allowed in part of the northern portion of this area. A prescribed fire and seeding program would be implemented in one area just within the northern boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100C, SPRUCE CANYON

The 20,350-acre Spruce Canyon WSA is located in the Book Cliffs to the west of the Flume Canyon WSA. Instream drop structures would be installed in Diamond Canyon to improve water quality. Present management of livestock would continue, except in the Diamond Allotment, which would have a change in season of use and a land treatment, and in the Cisco Mesa Allotment, where livestock manipulation techniques would be implemented. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and elk winter range. A prescribed fire and seeding program would be implemented in one area just within the southern boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-100C, COAL CANYON

The 61,430-acre Coal Canyon WSA is located in the Book Cliffs northeast of Thompson, Utah. Instream drop structures would be installed in Horse and Cottonwood canyons to improve water quality. Gully plugs, contour furrows, and retention dams would be constructed in the Sagers and Cisco watershed subbasins to help reduce salinity within the Colorado River. Vegetation manipulation projects and land and watershed treatments would be implemented within the critical watershed subbasin found within this WSA to improve poor watershed conditions. Present management of livestock would continue, except in the Cisco Mesa, Cisco Springs Wash, Nash Wash, and Barley Flat-Ronzio allotments, where livestock manipulation techniques would be implemented. Also on the Barley Flat-Ronzio Allotment, livestock grazing on saline soils would be manipulated. The areawide monitoring program would be used to determine future stocking rates within this area. All of this area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and mineral development. All of this area would be open to oil and gas leasing with special stipulations to protect watersheds, floodplains, soils highly subject to erosion, and deer winter range, except for the southeast corner of the area, which would be open to leasing with standard stipulations. A prescribed fire and seeding program would be implemented in one portion of the northeast section of the area. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-116/117, BLACK RIDGE CANYONS WEST

The Black Ridge Canyons West WSA, CO-070-113A/UT-060-116/117, totals 54,290 acres. The majority of the WSA lies in Colorado.

The 5,100-acre portion of the Black Ridge Canyons West WSA within the GRA is located along the west side of the Utah-Colorado border just south of the Colorado River. Livestock would continue to be managed by the Grand Junction District. All of this area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and mineral development. The central portion of this area would be open to oil and gas leasing with special stipulations to protect deer and elk winter range and the Colorado River corridor and to prevent excessive erosion on slopes greater than 50 percent. Portions around the eastern boundary would be open to leasing with no surface occupancy. Commercial survival school outings would continue to be allowed within this area. All of this area would be managed under a limited fire suppression policy.

UT-060-118, WESTWATER CANYON

The 31,160-acre Westwater Canyon WSA is located near the Utah-Colorado border. Present management of livestock would continue, except on the Agate Allotment, where livestock manipulation techniques would be implemented, and on the Buckhorn Allotment, where the class of livestock would be changed. The areawide monitoring program would be used to determine future stocking rates within this area. The central section of this area along the eastern bank of the Colorado River would be closed to ORV use. ORV use in the area adjacent to the north bank of the Colorado River would be limited to existing roads and trails. The remaining portion of the area would be designated open to ORV use. All public lands would be retained by the Federal Government. Major rights-of-way would be excluded from the central portion of the area along both sides of the Colorado River. The lands within this area would be open to mining claim location and development. New oil and gas leasing would not be allowed in the central and eastern portions of this area, while portions of the areas along the northern, western, and southern boundaries would be open to leasing with no surface occupancy to protect water quality, the Colorado River corridor, and wildlife values and to prevent excessive erosion on slopes greater than 50 percent. Certain areas adjacent to the western and southern boundaries would be open to leasing with standard stipulations. Commercial survival school outings would be allowed within this area. The river recreation management program would continue along the portion of the Colorado River within this area. A prescribed fire and seeding program would be implemented in a portion of this area along its western boundary. The remainder of the area would be managed under a limited fire suppression policy.

UT-060-131B, LOST SPRING CANYON

The 3,880-acre Lost Spring Canyon WSA is located adjacent to the northeast boundary of Arches National Park in Grand County, Utah. No watershed or salinity treatments are planned. Present livestock management would continue. No livestock improvements or vegetation treatments are proposed within the area. The areawide monitoring program would be used to determine future stocking rates within this area. All of the area would be designated open to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and mineral development. All of this area would be open to oil and gas leasing. The area would be managed under a limited fire suppression policy. No designated utility corridors are proposed for the area.

UT-060-138, NEGRO BILL CANYON

The 7,620-acre Negro Bill Canyon WSA is located about 3 miles east of Moab, Utah. It includes Negro Bill Canyon and a portion of the surrounding slickrock plateau. Present mangement of livestock would continue. Livestock would continue to be excluded from the lower 3 miles of the canyon. The areawide monitoring program would be used to determine future stocking rates within this area. Negro Bill Canyon would be designated closed to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to leasing with standard stipulations. The canyon portion of the area would be managed as an ONA. All of this area would be managed under a limited fire suppression policy.

UT-060-139A, MILL CREEK

The 9,830-acre Mill Creek WSA is located about 1 mile east of Moab, Utah. Present management of livestock would continue, except on the South Sand Flats Allotment, where the season of use would be changed. The areawide monitoring program would be used to determine future stocking rates within this area. ORV use within the Mill Creek area would be limited to designated roads and trails. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and development. Mill Creek Canyon would be open to oil and gas leasing with no surface occupancy to protect watershed values. The remainder of the area would be open to leasing with standard stipulations. All of this area would be managed under a limited fire suppression policy.

UT-060-140A, BEHIND THE ROCKS

The 12,770-acre Behind the Rocks WSA is located less than a mile from Moab, Utah on top of the red rock rim along the west sides of Moab and Spanish valleys. Present management of livestock would continue. The areawide monitoring program would be used to determine future stocking rates within this area. All of the area would be designated closed to ORV use. All public lands would be retained by the Federal Government. The lands within this area would be open to mining claim location and development. No new oil and gas leasing would be allowed in the central portion of the area. The area just within the boundary would be open to leasing with no surface occupancy. All of this area would be managed under a limited fire suppression policy.

GLOSSARY

Active nonuse (Grazing). The active grazing privileges not used or paid for by an operation during a year. Active nonuse and active use equal active grazing privileges or qualifications (see Grazing preference).

Active use (Grazing). The number of animal unit months (AUMs) that a livestock operation actually uses and pays for during a year. See Active nonuse.

Alkali soil. Soil having so high a degree of alkalinity (pH 8.5 or higher), or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Allotment. An area of land where one or more permittees graze their livestock. Generally consists of public land but may include parcels of private or State lands. The number of livestock and season of use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture.

Allotment management plan (AMP). A concisely written program of livestock grazing management, including supportive measures, if required, designed to attain specific management goals in a grazing allotment.

Animal unit month (AUM). The amount of forage necessary for the sustenance of one cow or five sheep for 1 month.

Base property. Those lands in a ranching enterprise which are owned or under long-term control of the operator and have the capability to sustain the number of livestock for a specified time period (base property requirement).

Changing season of use. Adjusting the time of livestock grazing on a range area based on type of vegetation or stage of vegetation growth.

Community. An aggregate of organisms that form a distinct ecological unit. Such a unit may be defined in terms of plants, animals, or both.

Corridor. A linear strip of land forming a passageway between two points in which transportation and/or utility systems exist or may be located.

Critical wildlife habitat. That portion of the living area of a wildlife species that is essential to the survival and perpetuation of the species, either as individuals or as a population.

Cultural resources. Those fragile and nonrenewable remains of human activities, occupations, and endeavors as reflected in sites, buildings, structures, or objects, including works of art, architecture, and engineering. Cultural resources are commonly discussed as prehistoric and historic values, but each period represents a part of the full continuum of cultural values from the earliest to the most recent.

De facto corridor. An area in which one or more linear facilities already exist. Such a land use pattern probably developed in response to considerations such as topography and ease of access which prompted closely parallel rights-of-way. This pattern did not develop with the intent of establishing the best corridor based on environmental considerations.

Designated corridor. A linear area of land with legally defined and recognized boundaries and capacities having environmental or engineering advantages over other areas for the location of present or future rights-of-way. These areas are identified by legal public notice.

Desirable plants. Those plants that are palatable and productive forage species, often dominant under climax or near climax conditions. They are normally long-lived plants which can include grasses, forbs, and browse.

Direct effect. Changes in sales, employment, or income of a firm that result directly from the firm's change in output.

Easement. The right held by one person to make use of the land of another for a limited purpose.

Ecological condition. The present state of vegetation of a range site in relation to the climax (natural potential) plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a plant community resemble that of the climax plant community. An ecological site condition is basically an ecological rating of the plant community. Air-dry weight is the unit of measure used in comparing the composition and production of the present plant community with that of the climax community.

Economic impact. The change, positive or negative, in economic conditions (including distribution and stability of employment and income in affected local and regional economies) that directly or indirectly results from an activity, project, or program.

Employment. The sum of persons in the labor force who are currently employed (including full-time and part-time workers).

Endangered animal species. Any animal species in danger of extinction throughout all or a significant portion of its range. This definition excludes species of insects that the Secretary of the Interior determines to be pests and whose protection under the Endangered Species Act of 1973 would present an overwhelming and overriding risk to man. See Threatened animal species.

Endangered plant species. Species of plants in danger of extinction throughout all or a significant portion of their ranges. Existence may be endangered because of the destruction, drastic change, or severe curtailment of habitat, or because of overexploitation, disease, predation, or even unknown reasons. Plant taxa from very limited areas (e.g., the type localities only), or from restricted fragile habitats usually are considered endangered. See Threatened and Sensitive plant species.

Erosion. The group of natural processes including weathering, dissolution, abrasion, corrosion, and transportation, by which earthy or rocky material is removed from any part of the earth's surface.

Fire management. The integration of fire protection, prescribed fire, and fire ecology knowledge into multiple use planning, decision making, and land management activities. Fire management is not a program of letting fires burn. Fire management places fire in perspective with overall land management objectives to fulfill the needs of society.

Floodplain. The flat ground along a stream covered by water at the flood stage.

Forage. Vegetation of all forms available for animal consumption.

Grazing preference. The total number of AUMs of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee. This may include active preference or suspended preference, or a combination of the two.

Impact. A change in the ecosystem resulting from or accelerated by human action.

Income. Employee compensation, profits, rents, and other payments to households.

Indirect effect. Changes in sales, employment, or income that result when supporting industries sell goods or services to directly affected industries or businesses.

Induced effect. Changes in sales, employment, or income that result when employees or owners of directly or indirectly affected industries spend their income within the economy.

Instream drop structures. Artificial structures installed to minimize the erosive progression of a gully or stream.

Lands disposal. A transaction that leads to the transfer of title to public lands from the Federal Government.

Land treatment. Alteration of the soil and/or vegetation of an area by mechanical or chemical means or by burning.

Limited suppression. A policy that considers areas where fire control is extremely difficult or where the values threatened do not warrant the expense associated with full suppression procedures.

M, I, C categorization. The grouping of allotments into three different categories (M=maintain, I=improve, and C=custodial) for management purposes.

Mitigating measures. Methods used (often included as lease stipulations) to reduce the significance of, or eliminate, an anticipated environmental impact.

Monitor. To scrutinize or check systematically with a veiw to collecting certain specified categories of data.

Multiple use planning. Planning for harmonious and coordinated management of the various surface and subsurface resources, without impairment of the land, that will best meet the present and future needs of the people.

Off-road vehicle (ORV). Any motorized vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, excluding (1) any nonamphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorizing officer, or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used in times of National defense emergencies. (Quoted from Executive Order 11644 as amended by Executive Order 11989.)

Perennial stream. A stream that flows throughout the year.

Permittee (grazing). A person who has livestock grazing privileges on an allotment or allotments within the resource area.

Plant vigor. The relative well-being and health of a plant as reflected by its ability to manufacture sufficient food for growth and maintenance.

Preference. See Grazing preference.

Prescribed fire. The skillful application of fire to natural fuels under conditions of weather, fuel moisture, soil moisture, etc., that will allow confinement of the fire to a predetermined area and at the same time produce the intensity of heat and rate of spread required to accomplish certain planned benefits to one or more objectives of wildlife management, grazing, hazard reduction, etc. Its objective is to employ fire scientifically to realize maximum benefits at minimum damage and acceptable cost.

Public land. Formal name for lands administered by the Bureau of Land Management (BLM).

Range trend. This is the change in vegetation and soil characteristics as a direct result of environmental factors, primarily climate and grazing. Studies in range trend are used in combination with other studies to evaluate AMPs and grazing systems. Trend data are collected on key areas and relies on key species to represent the pasture or allotment.

Rehabilitation. Restoration of partially or totally lost biological productive capabilty.

Rest. Refers to seasonal resting from grazing of a range to allow plants to replenish their food reserves, seeds to ripen, seedlings to become established, and litter to accumulate between plants.

Right-of-way. The legal right for use, occupancy, or access across land or water areas for a specified purpose or purposes. Such use on Federal land is authorized by permit, lease, easement, or license. Also, the lands covered by such an easement or permit.

Riparian. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to the plants of all types that grow along or around springs.

Riparian vegetation. Water-loving plants (phreatophytes or hydrophytes) such as sedges, tamarisk, cottonwood, water birch, and willow.

Saline soil. Soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Salinity. Total solids in water after all carbonates have been converted to oxides, all bromide and iodide have been replaced by chloride, and all organic matter has been oxidized.

Season of use. The time of livestock grazing on a range area based on type and stage of vegetative growth.

Sediment. Soil or mineral material transported by water and deposited in streams or other bodies of water.

Sensitive plant species. A plant that is not officially listed as threatened or endangered, but is being considered for such designation.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Stipulation. A condition or requirement attached to a lease, usually dealing with protection of the environment or recovery of the mineral.

Threatened animal species. Any animal species likely to become endangered within the foreseeable future throughout all or a significant part of its range. See Endangered animal species.

Threatened plant species. Species of plants that are likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges, including species categorized as rare, very rare, or depleted. See Endangered and Sensitive plant species.

Topography. The relief and contour of the land, especially when taken collectively, as over a region or large area.

Total dissolved solids (TDS). Salt--an aggregate of carbonates, bicarbonates, chlorides, sulfates, phosphates, and nitrates of calcium, magnesium, manganese, sodium, potassium, and other cations that form salts. High TDS solutions can change the chemical nature of water. High TDS concentrations exert varying degrees of osmotic pressures and often become lethal to life in an aquatic environment.

Wilderness area. An area set aside for preservation of natural conditions for scientific or recreational purposes, uncultivated and uninhabited, and usually roadless.

Wilderness study area (WSA). An area determined, through BLM's wilderness inventory, to have all of the wilderness characteristics (criteria) described in the Wilderness Act of September 3, 1964.

Wildlife. All species of mammals, birds, fish, amphibians, and reptiles found in a wild state.

Wildlife habitat. All elements of a wild animal's environment necessary for completion of its life cycle. These elements include food, cover, water, and living space.

LIST OF ABBREVIATIONS

AMP	allotment management plan
AUM	animal unit month
BLM	Bureau of Land Management
C	Custodial management category (for grazing allotments)
CFR	Code of Federal Regulations
EIS	environmental impact statement
FLPMA	Federal Land Policy and Management Act of 1976
GRA	Grand Resource Area
HMP	habitat management plan
I	Improve management category (for grazing allotments)
IMP	Interim Management Policy
M	maintain management category (for grazing allotments)
MSA	management situation analysis
NEPA	National Environmental Policy Act
ONA	Outstanding Natural Area
ORV	off-road vehicle
RMP	resource management plan
ROD	record of decision
RPS	rangeland program summary
UDWR	Utah Division of Wildlife Resources
USFS	U.S. Department of Agriculture Forest Service
WSA	wilderness study area

INDEX

Page

Access easement . . . 1, 14, 22
Activity plans . . . 2, 6
Alternatives . . . 4
Animal unit months . . . 1, 6, 16, 27, A-29 thru A-37
Archaeological resources . . . 32
Avoidance areas (utilities) . . . 22
Class of livestock . . . 1, 20
Community expansion . . . 22
Corridors . . . 2, 22
Critical watersheds . . . 1, 16
Critical wildlife habitat . . . 2
Cultural resources . . . 32
Decision . . . 1, 2, 3
Designations . . . 1, 2, 14, 22
Easement . . . 1, 14, 22
Environmental consequences . . . 4, 7, A-1 thru A-17
Environmental preferability . . . 4
Evaluation (of the RMP) . . . 6, 34, 35
Fire management . . . 2, 27
Forage allocation . . . 1, 20, 38
Fuelwood permits . . . 32
Goal (of the RMP) . . . 15
Goals (of the alternatives) . . . 4, 5
Grazing manipulation . . . 1, 16
Grazing use . . . 1, 2
Humate sales . . . 2, 3, 27
Implementation (of the RMP) . . . 35, 39, 42
Instream drop structures . . . 1 ,16
Interim management policy . . . 2, 15
Issues . . . 1, 9, 12
Land ownership and administration . . . 9, 11
Land treatments . . . 1, 3, 16
Land use permits . . . 32
Lands disposal . . . 1, 14, 22
Leasable minerals . . . 2, 3, 27
Leasing categories . . . 2, 27, A-43 thru A-46
Licensed use (grazing) . . . 1, 20
Limited fire suppression . . . 2, 27
Livestock manipulation techniques . . . 1, 16
Livestock use . . . 1, 2
Locatable minerals . . . 2, 22, 32
Management actions . . . 1, 16, 20, 22, 27, 29, A-29 thru A-37
Mineral leases . . . 2, 27
Mineral material sales . . . 2, 27

Page
Mineral withdrawals . . . 2, 22
Mining claims . . . 2, 22
Mitigation . . . .6, A-19 thru A-41
Monitoring (of grazing allotments) . . . 1, 2, 6, 20, 38, 39, 40, 41, 43, 44, A-39 thru A-41
Monitoring (of the RMP) . . . 6, 34, 35
Negro Bill Canyon (ONA) . . . 2, 27
Off-road vehicle designations . . . 1, 14, 20
Off-road vehicle use . . . 14
Oil and gas leasing . . . 2, 27, A-43 thru A-46
Ongoing management programs . . . 29, 32, 33
Outstanding Natural Area . . . 2, 27
Planning criteria . . . 6, 12, A-23 thru A-27
Planning issues . . . 1, 9, 12
Planning process . . . 9
Potash leasing . . . 2, 3
Prescribed fires . . . 2, 27
Range improvement projects . . . 38, 45
Rangeland program summary . . . 2, 37 thru 45
Realty actions . . . 1, 14, 22
Recreation facility maintenance . . . 2, 27
Recreation permits . . . 27
Resource management plan . . . 3, 9
Rest room construction . . . 27
Riparian areas . . . 20
River use management . . . 2, 27
Salable minerals . . . 2, 3, 22
Salinity control treatments . . . 1, 16
Sand and gravel sales . . . 2, 3, 22
Schedule (to implement RMP) . . . 35
Season of use (livestock) . . . 1, 14, 20
Sedimentation . . . 1, 12
Selective management . . . 37
Special use permits . . . 27, 32
Standard operating procedures . . . .6, A-19 thru A-22
Stipulations (leasing) . . . A-43 thru A-22
Stocking rates (livestock) . . . 1, 6
Subalternatives . . . 4
Support requirements . . . 33
Threatened and endangered species . . . 33
Utility corridors . . . 2, 22
Valid existing rights . . . 3
Vegetation manipulation . . . 1, 16
Watershed treatments . . . 1
Wild and Scenic river management . . . 2, 27
Wilderness study areas . . . 2, 3, 15, 27, A-47 thru A-50
Wildlife habitat . . . 1
Wildlife waters . . . 1, 20
Withdrawals . . . 2, 22
Woodland products . . . 32

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